

ACCS

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VOL. LXXXIV No. 2171

[Registered at the G.P.O.
as a newspaper]

LONDON, DECEMBER 24, 1960

SPEED AND
SAFETY
IN
RAILWAY
OPERATION

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PRICE ONE SHILLING

Electric Traction Troubles

MAJOR teething troubles are not an entirely unknown factor in putting new transport equipment to work. One recalls the Netherlands Railways withdrawal of its new diesel railcar services in prewar days, irregularities on the newly-electrified Metropolitan District Railway in 1905, and compound steam locomotives at the end of the 19th century which were not up to their intended duties. Of modern equipment aircraft are not infrequently suspect of such troubles as to be grounded, while similar afflictions have put an entire bus fleet out of use across the Atlantic. That sympathetic perspective does not mitigate the regret with which the present suburban electric traction troubles must be received, but it points to the prospect of surmounting them. In a chain with many links one or two have proved weaker than could reasonably have been anticipated by the railways or the builders; in one case the circuit layout and in the other transformers have given rise to difficulties. As is now well known, these are such that while Eastern Region trains are being modified and three London Midland sets are helping out in a modified service, all the suburban trains of the Scottish Region's Glasgow electrification have been withdrawn and a steam service has operated from December 19. It was right for British Railways to adopt a new and most promising system of electric traction; some multiple-unit trains on the 25,000-volt services have been operating for long periods and 6,600-volt 50-cycle trains have been at work since 1953. But suburban service is notoriously searching; its calls on power equipment are great. Out of present troubles we are sure that British Railways and its suppliers will emerge triumphant; although it would have been preferable for the circumstances not to have arisen, far from it being a blow to British manufacturing prestige, our electric traction industry will gain knowledge from the hard school of experience which will stand it in good stead when coping with the severe problems presented by overseas railways.

West End Stores and Parking

LARGE London retailers are dissatisfied with the way in which town planning requirements regarding parking space in new buildings are working out. They might in general prefer to contribute, either by a special rate or capital payment, to the provision of local authority-run public parking accommodation. This emerged last Friday during the inquiry into the London plan. The present London County Council requirement, one car space for every 2,500 sq. ft. of gross floor space in "departmental stores and large retail establishments," applies alike to the exclusive Knightsbridge establishment and the Oxford Street fashion store which appeals to the teenage market—hardly the "carriage trade," as one witness freely conceded. One popular new store was obliged to provide room for 20 cars, but sheltered an average of less than one customer's car daily; another solved this embarrassment by providing its garage on the roof, where needless to say it is rarely used. The lift shaft, however, occupies 600 sq. ft. of every floor. It was stated that the garage run jointly by Selfridges and Lex Garages is now fully utilised, in consequence of meter parking no doubt, but that only one-third of the space is occupied by short-term parkers. No one knows whether or not they are Selfridge shoppers. An L.C.C. witness said that it was by no means unsympathetic to the notion of retailers contracting out of their responsibilities in the manner suggested, but it would need fresh legislation.

Another London Experiment

MEANWHILE the council has announced that it is on the point of engaging a firm of consultants specialising in traffic engineering. It would conduct a survey leading to a long-term programme of road improvements. Ideally this survey should not stop short at the artificial L.C.C. boundary. It is already committed to a very

CURRENT TOPICS

modest road programme of this character and obviously any larger scheme resulting from the report of the consultants could only be implemented if the size of grants was increased. The Minister of Transport reported optimistically last week on the early days of the Christmas Pink Zone, but an ominous note was struck by the news that London buses are apparently moving no faster than in previous weeks. The fate of public transport has been quite ignored in the somewhat ingenuous reception given by the lay Press to the forthcoming one-way experiment for Tottenham Court Road. It involves several high-frequency bus services being shunted from one mile of a populous thoroughfare into a little-frequented byway 250 yd. distant. Now, buses go around looking for people, not the other way about,

improvement in the staff position. In view of the progress which has been made, therefore, and arising from the revised working arrangements, the Commission is confident that it will be able to deal with any traffic offered this winter unless working is affected by protracted bad weather or serious outbreaks of sickness.

U.I.C. Changes

SOME important changes took place at the recent meetings of the International Union of Railways in Paris. A member of the B.T.C., Mr. John Ratter, took over the chairmanship from Professor Oeftering, of the German Federal Railway, half-way through the meeting of the general assembly. It should be recalled that British Railways was appointed chairman-administration at

of the economic situation in contemporary Nigeria," but it is clear from the list of witnesses and memoranda submitted that no authoritative commercial body, such as any of the chambers of commerce, or the shipping conference, or the larger traders, either gave evidence or submitted memoranda; it would appear that the opinion is founded upon allegations made by a few dissatisfied traders of comparatively small calibre, and the railway trades unions. In considering industrial relations proper, the commission is on much firmer ground, and it is clear that it rejects many of the unions' claims.

A Bad Impression

IT is to be noted that a considerable number of allegations detrimental to the railway, and indeed to individuals, are reproduced in the report without any statement by the commission as to whether it accepts or rejects them. Such procedure can only result in readers being left with a bad impression, not only of the railway administration, but also of the procedure of the commission. In conclusion two interesting points may be touched upon. The first is the statement on page 17 that "experience elsewhere has shown the unwisdom of the general manager of a railway succeeding to the chairmanship...." It would be interesting to have specific instances to back up this opinion, for it is to be noted that the practice in India has always been, and still is, to promote a general manager to be chairman of the Railway Board (formerly chief commissioner of railways), and it cannot be said to have been unwise in that country. The second is the suggestion that a Nigerian officer can be "groomed" in 18 months so as to enable him to discharge the onerous duties of the general manager. The Europeans in the Indian railway system had some two decades in which to train Indian officers to responsible posts. In Nigeria it would be difficult to recall any real effort to Nigerianise officer grade posts until after 1953. Altogether, the report does not impress the reader as a document which is likely to help the Nigerian Railway Corporation to be a more efficient organisation.

Greetings

The Directors and Staff of
MODERN TRANSPORT
wish Readers and Advertisers
the Compliments of the Season
and a Happy and Prosperous
New Year

if they are to pay; a reversal of the natural order of things courts inconvenience on the maximum scale in terms of human beings, that is to say, bus passengers as opposed to car riders. Moreover, some loss of bread-and-butter short-distance fares may be expected. It seems a high price to pay for an expedient, one objective of which is the elimination of conflicting movements at the so-called St. Giles's Circus. The interesting thing is that this junction is about to be reconstructed in the form of a one-way circulatory system.

Railway Freight This Winter

BRITISH Railways carried 14,500,000 tons more freight during the first 47 weeks of 1960 than during the same period of 1959, it was reported at last week's meeting of the Winter Transport Central Joint Conference. The conference, which comprises representatives of the British Transport Commission, the Federation of British Industries, the Association of British Chambers of Commerce, the National Union of Manufacturers and the National Farmers' Union, met under the chairmanship of Mr. K. W. C. Grand, a member of the Commission. The increased carryings are made up of 2,400,000 tons of general merchandise, 7,700,000 tons of minerals and 4,400,000 tons of coal and coke. To reduce delays which might arise from congestion in the areas most affected by staff shortages, arrangements have been made in conjunction with trade and industry and in particular with the National Coal Board and their customers, for many more trains to run direct from originating areas to consumer areas. There has also been a good deal of re-routing of traffic. Following an extensive inquiry, revised arrangements will be introduced in January, 1961, to increase the proportion of through working and to reduce the number of wagons dealt with at exchange junctions, which are liable to be affected by current difficulties. There has recently been an

last year's general assembly. Then M. Louis Armand was appointed secretary-general of the U.I.C. as from January, 1961. M. Jean Tuja, secretary for some 10 years, has been made "honorary secretary-general" of the U.I.C. and will remain as an adviser to the U.I.C. until January 1, 1962. The board of management increased its membership from 12 to 14, including the chairman-administration, and decided to give a seat to Austria and Hungary. Various amendments were made to the functioning of the Office of Research and Experiments (ORE) and the International Railway Documentation Bureau (BDC). The Information Centre of European Railways (CICE) was reorganised and becomes the Information and Publicity Centre of the European Railways (CIPCE) with a publicity section and a public relations section. An International Railway Film Bureau (BFC) was set up; this body will replace the meeting of railway film experts. Another change is that arrangements have been made so that the heads of departments (in French directeurs de service) can take a more active part in the work of U.I.C. A portrait and biography of Monsieur Armand appear on page 7.

A Nigerian Inquiry Report

LAST week there became available the report of the Elias Commission which was charged with the duty of inquiring into the economics, administration and industrial relations of the Nigerian Railway Corporation and of making recommendations thereon to the Federal Government of Nigeria. The report does not appear to contain a succinct statement as to whether the economics are sound or unsound. The commission has instead pinpointed a number of matters on which it makes recommendations, the overall effect of which does not seem likely to affect the economics of the railway to any great degree. The commission says management is "out of touch with the realities

Computers in the Motor Industry

THE system that has grown up with the motor industry of producing vehicles in vast quantities yet with sufficient variety to appeal to individual taste has brought massive problems in stock control. One basic car model, for example, can have as many as 900 variable items in its final make-up, of which colour, furnishing and optional equipment are obvious ones. With so many variables, the number of possible permutations is almost infinite yet exactly correct components must be fed into the production lines precisely when required if costly holdups are to be avoided. Conversely, with production in some cases amounting to hundreds of vehicles daily, excess stocking must be avoided on the grounds of both cost and physical storage capacity. Ideally, deliveries of raw materials to component lines and of brought-in and works-manufactured components to assembly lines should match precisely the planned production schedules. Methods of approaching, if not attaining, this ideal, making use of the electronic computer, were described to us recently by Mr. H. S. Woodgate, of International Computers and Tabulators, Limited, who specialises in this field. The key to the efficiency of the computer in stock control, as in so many fields, is its fantastic speed of calculation and accuracy, which are unattainable by any other means. The motor industry has made a gradual approach to the use of the computer in stock control and invoicing, having passed through the punched card and machine calculator stages over a period of some years. A modern I.C.T. system for stock control is now being adopted by some manufacturers; it can also be used for invoicing, purchasing and other calculating tasks and can process each of the 20,000 or so individual parts of a particular vehicle in a time of about 20 min. when a tape rather than a card information system is used.

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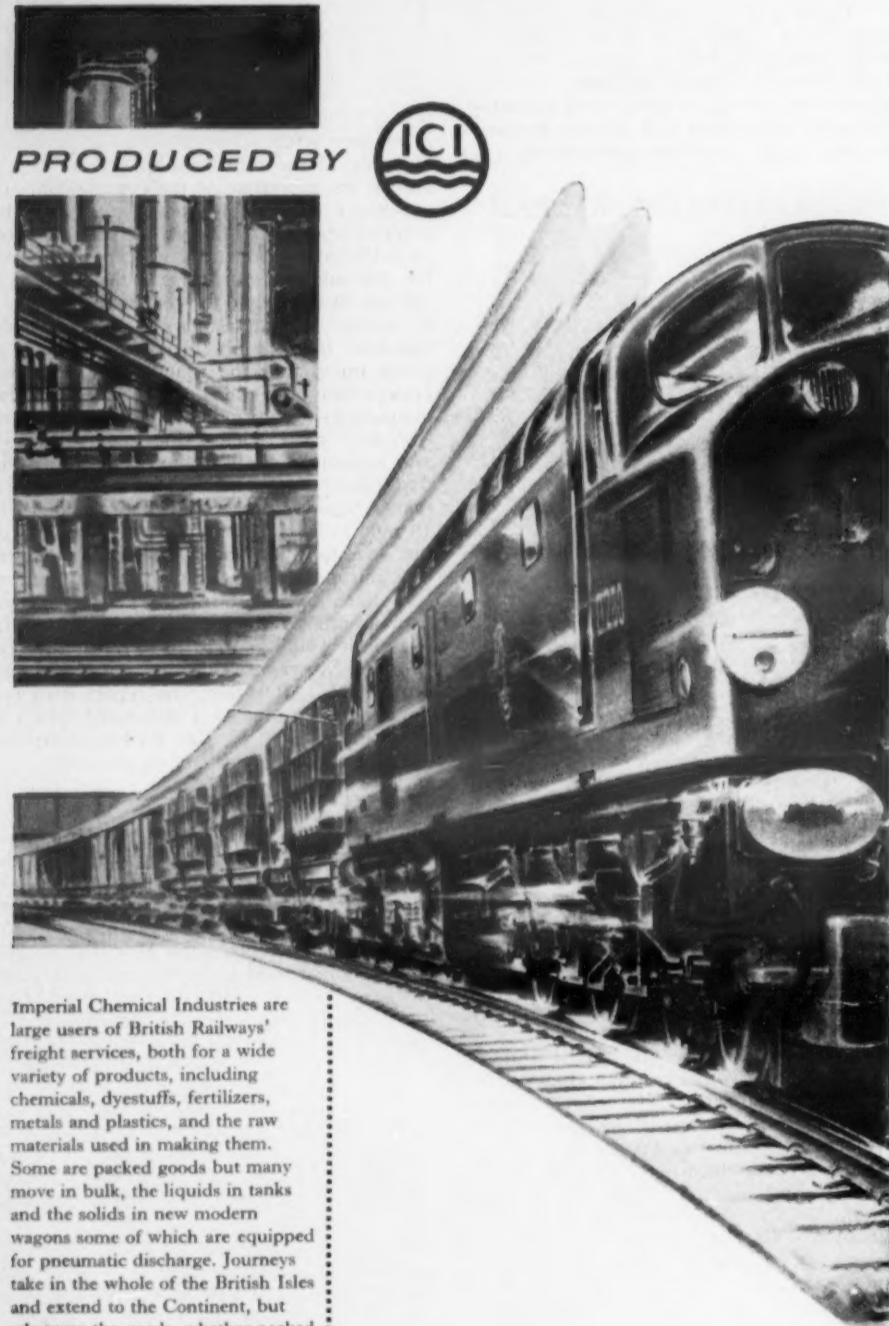
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Published Every Friday

RUSSELL COURT, 3-16 WOBURN PLACE,
 LONDON, W.C.1

Telephone Number: TERMINUS 0203 (3 lines)

Telegraphic Address: Transpubco, Westcent, London

ANNUAL SUBSCRIPTIONS

BRITISH ISLES, 47/6; CANADA, 45/-;

ELSEWHERE ABROAD, 47/6

payable in advance and postage free

The Editor is prepared to consider contributions offered for publication in MODERN TRANSPORT, but intending contributors should first study the length and style of articles appearing in the paper and satisfy themselves that the topic with which they propose to deal is relevant to editorial requirements.

★ ★ ★
Retrospect

MANY transport men all over Britain will look back on 1960 as a year of desperate struggle with floods; to others again it will have been a year of uncertainty born of one inquiry upon another into the railways and their modernisation plans, with consequent frustration and delay in the carrying out of an urgent task. Nevertheless, British Railways can record much progress; electric traction has been extended and diesel-electric Pullman trains began fast luxury services on three routes. Among railway installations brought into use Margam freight marshalling yard, Neville Hill motive power depot and Stratford diesel depot may be cited as typical. Two wages disputes have been settled at the eleventh hour and the Guillebaud report suggested for railwaymen rewards closer to those of comparable workers. The Channel Tunnel Study Group (which had also considered a bridge) reported in favour of a tunnel, although bridge advocates have since been eloquent. The London Travel Committee reported strongly in favour of the proposed Victoria Line tube as a means of traffic relief, while London Transport has begun to increase the capacity of the Piccadilly and Central Lines by provision of new trains; it has electrified the Chesham branch. An interesting feature of the latest rolling stock contract is that the successful tenderer for new Central Line trailer cars is the Derby carriage and wagon works of British Railways. Abroad, the Swedish diesel-pneumatic locomotive and the operation of through sleeping cars from Hook of Holland to Moscow with change of gauge en route are remarkable. The East African Railways introduced main-line diesel-electric traction.

On the Roads

HIGHWAY development has been marked by the opening of one or two more bypasses, some of which, including the Maidstone bypass, qualify as motorways. It would be rashly optimistic to suggest either satisfaction with the surface of that road or with the curious route of its western end, which has now achieved its laggard opening. The Ross spur motorway has also run a leisurely course to its opening day. The small amount of motor road under construction and the absence of three-lane carriageways from the programme have drawn the fire of the Roads Campaign Council. The Kingsferry Bridge renewal, vastly improving access to the Isle of Sheppey both for rail and road, and reducing the hazard to shipping, is among works completed in 1960. Notable operating developments during the year include the completion of the British Road Services depot at Townsend Lane, Liverpool; the finishing off of the S.P.D. depot chain in the Unilever group; and the opening of Tilling group bus stations in Crewe and Bedford. Other bus stations include that of Ribble in Liverpool and the U.T.A. establishment at Oxford Street, Belfast. The London Transport plan for trolleybus replacement has passed the half-way stage and the next two phases will see trolleybuses removed from Tottenham Court Road in time for the one-way traffic scheme

on that thoroughfare and Gower Street next May. New vehicles are numerous: the B.M.M.O. prototype 78- or 80-seat under-floor-engined integral double-deck D10 bus, following production batches of the more orthodox integral D9; the B.M.C. light van range and the versatile Commer $\frac{3}{4}$ -ton vehicle in 19 official guises; the Dennis Vendor for itinerant salesmen; the Dennis Aerolader and the corresponding Douglas unit for getting freight and baggage quickly into aircraft; the remarkable Bedford TK range (coupled with an output that threw off 100,000 vehicles by early December); the Scammell Trunker and Handyman, first fruits of a reorganised production line; and going back to the passenger side, the A.E.C. Regal VI and the new Leyland Lion, a rear-engined single-deck chassis. The Daimler Fleetline, also rear-engined, was the first product of that marque under Jaguar control.

In the Air

BRITISH airline operation reached more stability financially—British European Airways produced a £2 million profit and British Overseas Airways Corporation reduced its deficit by £1,983,000. The Government promptly decided to take some of this fat off them by raising landing fees to a point where British airports are alleged to be the world's dearest to use; as there is no universally observed basis of costing this is hardly susceptible of proof. But as shipowners are wont to point out the nation still pays a high proportion of air terminal costs and that is more than is done for seaports. The Government's strenuous endeavours to secure some amalgamation in the aircraft manufacturing industry have had some result. Two important mergers were of Bristol, Hunting, English Electric and Vickers-Armstrongs aircraft interests in the British Aircraft Corporation and of Armstrong Whitworth, Avro and de Havilland in the Hawker Siddeley Group. Meanwhile, helicopter interests of several companies, including Fairey's Rotodyne, have been brought together under Westland Aircraft. The technical development of aircraft continue apace and is reflected in new equipment for airlines. A jet service was introduced by Pakistan International Airlines in March; B.E.A. placed its Comet 4B fleet in service; and B.O.A.C. has begun service with Rolls-Royce-engined Boeing aircraft. At the end of the year proposals for aircraft to fly at twice the speed of sound are still being mulled over.

Generally

THE year that witnessed the fortieth anniversary celebrations of the Institute of Transport also saw, on January 5, the demise of the Swansea and Mumbles Railway, a matter of more than local interest since on its route, over the plates of the Oystermouth Railway or Tramroad, the world's first railborne passenger-carrying business was initiated in 1807. George Francis Train's "American" tramway at Birkenhead opened in 1860 and the street tramway centenary was, therefore, celebrated, although the Englishman Curtis had operated a tramcar-like vehicle on the Mersey Docks and Harbour Board lines the previous year. But—sad blow to believers in tramways—the Sheffield system, the last in an English city, came to an end on October 8. In another sphere, the allegedly watered-down report on the shipbuilding industry has now appeared, beating the White Paper on the railways by a short head. Shipbuilders have launched such notable vessels as *Canberra*, *Caesarea* and *Sarnia* for widely different types of service and so bely the reputation of being behind the times which it was attempted to fasten upon them. Another remarkable ship, *Oriana*, has left on its maiden voyage to Australia and the Pacific; it incorporates sideways propulsion to accelerate work in ports. Other events in a year full of interest include the opening of the Tranmere oil terminal and the Crowthorne road research laboratory. Possibly most important of all as a means of amalgamating road transport and rail techniques is the Pressed Steel Company's Road-rail vehicle which seems destined to widen the scope of door-to-door transits with a cheap and fast trunk haul on rails.

MODERN TRANSPORT has an arrangement with Reuter's Trade Service whereby publication is made in this newspaper of all essential news from all parts of the world concerning traffic and transport by rail, road, sea and air and allied interests.

NEWS SUMMARY

THE B.T.C. is to be abolished. Proposed instead are five boards, one each for railways (with six regional management boards), London Transport and docks, an Inland Waterways Authority and a holding company for B.R.S., buses, hotels, etc. Overall would be a Nationalised Transport Advisory Council. About £1,200 million of B.R. indebtedness would be written off or placed in suspense. Statutory control of charges would go, except in London. Full details of these White Paper proposals will appear next week.

On December 16 the London County Council announced the appointment of Freeman, Fox

and Partners, consulting engineers, to undertake a traffic survey in the next two years as a basis for a programme of London highway improvement projects; associated with the British firm will be the American consultants, Wilbur Smith and Associates of New Haven, Connecticut.

More one-way streets are promised for Central London—from May 1, 1961, Tottenham Court Road will be northbound only, Gower Street southbound only, with consequential alterations in parts of Charing Cross Road, New Oxford Street and St. Giles High Street.

On December 15 the report *Research and Development Requirements of the Shipbuilding and Marine Engineering Industries*, prepared by the D.S.I.R., was published.

SWISS RAILWAY DEVELOPMENTS

Remarkable Display of Energy

By CECIL J. ALLEN, M.Inst.T.

RELATIVELY to its size, Switzerland today is showing remarkable energy in its railway development, and a faith in the future of its railways which is entirely commendable. Passenger traffic is still increasing, and at the holiday seasons and weekends in particular is taxing the principal stations to their limits. In Switzerland no inter-city or inter-town bus services are permitted, and the many postal and other motorcoach services in the country act as feeders from surrounding districts to the railways, which thus can profitably operate frequent services, even on minor branch lines.

A further encouragement to passenger traffic has been the Federal law of October last, which although authorising slight increases in ordinary fares on the national system, greatly reduced

of the Ae 6/6 type, has another 24 on order, one purpose being to work 1,200-ton freight trains between Basel and Chiasso with these locomotives in pairs, which are capable of working such loads up the continuous 1 in 38.40 gradients to the Gotthard Tunnel at a steady 75 km.p.h. (47 m.p.h.). The latest Lütschberg locomotive, comprising an 8,800 h.p. assembly of two Bo-Bo units permanently coupled, is regularly working 900-ton loads up the 1 in 37 approaches to the Lütschberg tunnel at the same speed.

Berne Station Reconstruction

Of new developments which the Swiss Federal Railways has in hand, by far the greatest is the entire reconstruction and enlargement of the main station at Berne, now in progress. Between the north side of the station and the park known as the Grosses Schanze, bordered by the buildings in the Hochschulstrasse (which include the S.F.R.

will be controlled by a new all-electric signalling installation.

New Buildings

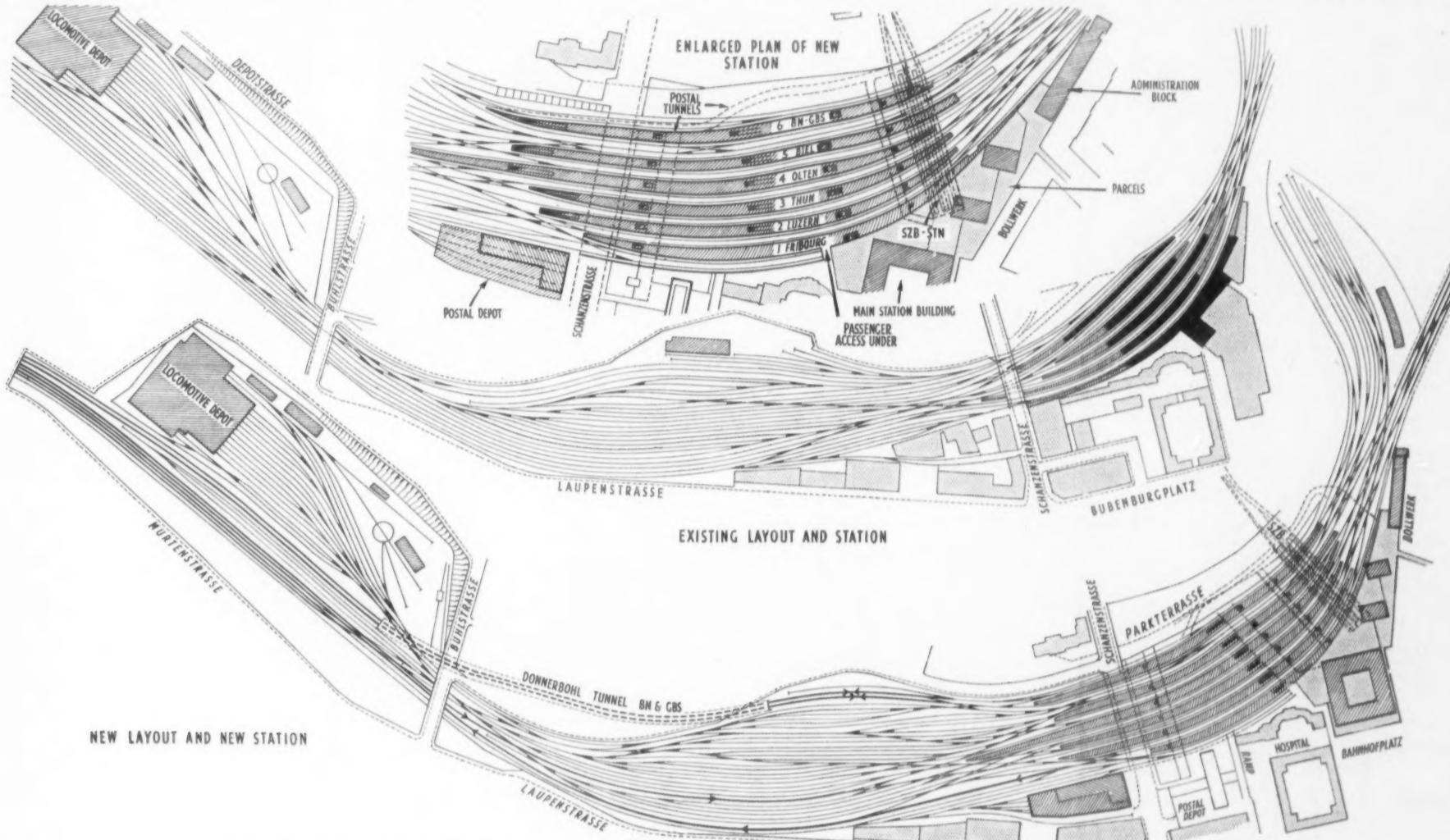
The plans provide for the demolition of the existing station buildings, including the original terminal portion of 1860, which this year celebrated its centenary, and is now used mainly for handling luggage. A new and imposing station block is to be erected adjacent to the Burgerstrasse hospital, and a large part of the station will be covered by a garage big enough to accommodate 500 cars. An entirely new post office building also forms part of the scheme, and another development of note is that the trains of the Berne-Zollikofen-Solothurn Railway (an independent company), which at present terminate in the street outside the station, are to be brought by tunnel into a new terminal under and at right angles to the S.F.R. tracks.

The cost of the railway part of this vast scheme is estimated at S.Fr. 81,000,000 (about £6,750,000), of which the Canton of Berne is contributing S.Fr. 12,250,000, and the City of Berne provides



Latest type of lightweight motor coach on the Arth-Rigi Railway (rack and pinion) descending from the summit of the Rigi seen on the skyline

for some distance, in order to provide greater freedom for shunting movements than has hitherto been possible with the restricted yard accommodation. At the inner end of this tunnel one through track is continued to join the southbound main



Layout of the former station at Berne with, below, the arrangement of the new station on which work is in progress; the upper inset shows details of platform arrangements

the fares on many of the minor lines, which previously had been based on artificially increased kilometragess; even with the help of cantonal and communal subsidies the operating handicaps of some of these lines were such that they could only pay their way by such high charges. Now, however, the Federal Government, realising the importance of railway transport to the country, is reimbursing to each minor company any loss sustained through the reduction in fares, on the basis of the receipts in the previous year. An extreme case of fare reduction is the Furka—

(head offices) the ground rises steeply, and already was held up by a retaining wall of considerable size. To obtain increased width, this eminence has been cut into further by blasting, and a much higher reinforced concrete retaining wall erected.

Room is thus being made for six island platforms

from 985 to 1,180 ft. in length, much longer and wider than the existing five platforms, and with 12 platform faces as compared with the present nine. A new passenger subway, 52 ft. 6 in. wide,

will connect with each platform by both a ramp and stairs, and will lead into a spacious central

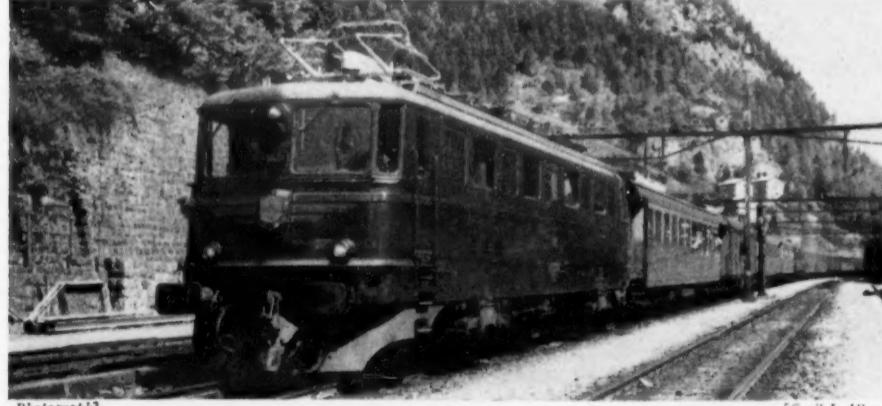
S.Fr. 10,750,000. The new postal depot and subways are expected to cost another S.Fr. 40,000,000 to S.Fr. 50,000,000, the garage S.Fr. 12,000,000, and the new Solothurn terminal and tunnel S.Fr. 10,000,000. The total time over which the work is likely to be spread is about 10 years, of which the third has now been entered; and with a station handling some 550 trains and 3,000 shunting movements every day some difficult problems will arise when diversion of the trains to the first of the new platforms begins, and during demolition of the existing station buildings and the bringing into service of the new block.

The whole course of events has been very carefully worked out, however, and the work is proceeding smoothly according to plan. What in some respects may prove an even greater problem is the projected reconstruction of the even

line about $\frac{1}{4}$ mile from the entrance. In addition to the comprehensive facilities now installed at both Göschenen and Airolo for handling motor-car traffic through the tunnel (which at times when the Gotthard Pass is closed by snow, such as Easter, attains very large dimensions), similar facilities have now been provided at Brigue and Iselle for working motor-cars through the Simplon tunnel. Various other stations are in course of reconstruction.

Widening Schemes

Work is continuing steadily, also, on the widening of certain main lines which still include some lengths of single track. Of these the most important is the line from Zurich to Chur, which as far as Sargans carries also the traffic for Austria by the Arlberg route. The work is now complete



Photograph] One of 50 6,000 h.p. Co-Co locomotives in service on the Swiss Federal Railways, seen at Göschenen; 24 more such units are on order

Oberalp Railway, over which the present fares are no more than two-fifths of what they were formerly; Montreux-Oberland Bernois fares have been roughly halved, and those of the Rhaetian Railway cut by about 27 per cent.

Freight Working

The freight position is not quite so happy, as much heavy freight is being carried over the roads, though even so the traffic over such lines as the Gotthard and the Lütschberg is near the maximum level that can be handled in comfort. As in other countries, improved pay conditions, reduced working hours, and more costly materials have added greatly to working expenses, but these additions are now being offset by the use of more powerful locomotives, permitting heavier train-loads and higher speeds.

In particular, the Swiss Federal Railways, having increased to 50 its stud of the highly successful 6,000 h.p. Co-Co electric locomotives

hall in the new station building. Four further subways, two at each end of the platforms, will provide for the transfer of luggage and mails.

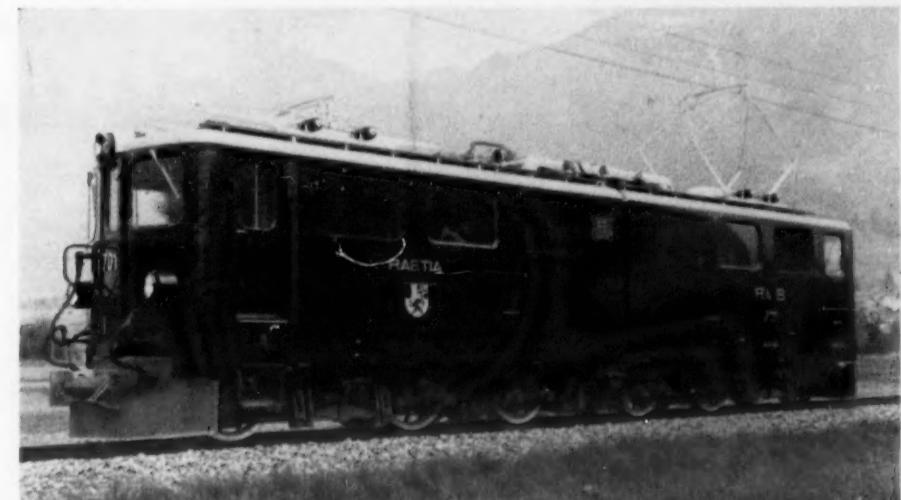
All freight traffic must pass through the passenger station, but from the western end a new independent double track will be laid in between the station and the goods station at Weyermannshaus which was opened in 1930. The trains of the Berne-Neuchâtel, Berne-Schwarzenburg, and Gürbetal lines (all part of the Lütschberg group), which at present find cramped accommodation at No. 5 platform, will be brought in tunnel under the new goods lines and the connections to the locomotive depot into the new No. 6 platform; an additional running line on one side of this, by means of a central double cross-over with the platform line, will enable the two ends of the platform to be used independently of one another. Connections at both ends of the station will be rearranged in such a way as to reduce conflicting train movements to the minimum, and the whole

larger terminal at Zurich, which despite its 16 platforms is experiencing increasing difficulty in handling its traffic.

Göschenen

Another station at present under reconstruction is Göschenen, at the northern end of the Gotthard tunnel. Here a long and wide new island platform is being built, with subway access from the main building. Parallel to the Gotthard tunnel, also, a new tunnel has been bored, extending inwards

as far as Ziegelbrücke, 35 miles from Zurich, and over the 16 miles from Murg through Sargans to Ragaz, leaving the eight-mile gap between Ziegelbrücke and Murg, over part of which the former single track was carried on a narrow and winding shelf along the precipitous slope on the south side of the Walensee. Here the new double-line Kerenzerberg tunnel, two miles long, has been bored, and was brought into use last spring. A small amount of work still needs to be done at (Continued on page 8)



Metre-gauge Bo-Bo-Bo 2,400-h.p. locomotive used on the 1 in 29 gradients of the Rhaetian Railway between Chur and St. Moritz

LORRY—BUS—COACH**Spotlight on Minibuses**

MOST of the traffic commissioners, in their summarised annual reports to the Minister of Transport for the year ended March 31, 1960, lay emphasis on the paucity of small 8-12 seat buses which are licensed for economy-class stage services, which was the primary intention when legislation was relaxed in their favour. The number of such vehicles licensed as public service vehicles for any purpose is itself small in relation to the numbers seen, especially in urban areas, and an indication of the probable amount of illegal operation. The vast majority of those licensed as p.s.v.s are used only on contract or private-hire work. The North Western area added 75; the West Midland area 51, "a few on stage services"; the East Midland area says 18 out of 78 were owned by established operators, though for what purpose is not stated; South Wales reports that only one owner applied to run a rural area stage service; the Western area had only one stage service minibus out of 61 licensed; the Scottish area total leapt from 69 to 188, but 33 are genuinely used on road service licenses. The reports were published this week by H.M. Stationery Office, price 3s.

Very few rural bus routes were withdrawn during the year under review and in several cases some alternative service was made available. Little additional mileage was necessary to cover abandoned railway services. The Yorkshire area commissioners comment in contrast that inter-urban express services were affected by new and increased diesel train services. Helped possibly by the splendid summer, the decline in passengers carried was generally slowed. Making allowance for non-reporting areas, it would seem that there is a total of roughly 1,000 8-12 seaters with p.s.v. licences throughout the country. The total number of one-vehicle operators, however, increased by under 300, from 1,237 to 1,508, so many minibus owners must presumably possess more than one. The total number of public service vehicles at March 31, 1960 (excluding London Transport) was 66,471, compared with 66,055 12 months earlier and the total number of operators 4,868 compared with 4,646. There were 138 prosecutions for using a vehicle without a p.s.v. licence.

C-Licensed Continental Operations

PARTICULARS of members engaged in operating C-licensed vehicles between the United Kingdom and European countries are being sought by the T.R.T.A. It is anxious to build up a picture of the extent and nature of Continental traffic.

G.P.O. Christmas Mail Fleet

THIS year the General Post Office is spending something like £500,000 up and down the country on hired road transport to carry the Christmas mail. In the London postal districts alone 1,100 vans are being hired. For the first time for some years the Metropolitan area of the R.H.A. has had no complaints of the rates offered to members, but it is evident from the motley collection of vehicles seen on this work that the bottom of the barrel has been scraped. A battered prewar furniture van bearing a Salisbury address, a van with a heavy towing frame projecting from the

rear (a nasty hindrance this, when backing up to a loading bay), and a builder's lorry with an old B.R.S. container body lashed to it were some of the specimens seen in the last few days bearing the insignia "Royal Mail." To some extent this situation is due to the preference of the G.P.O. for A- and B-licensed vans, rather than C-licensed vehicles, which might be in better shape.

Post-Christmas Strike Threat

THERE is a prospect of an unofficial one-day bus strike in areas served by the large provincial companies on Tuesday, December 27. This arises principally by the refusal of the employers to fall into line with the municipalities in granting a day

network. They can be bought for 2s. each at bus garages and local inquiry offices in the Country area. They will not replace the existing local road and rail time tables for the various country areas around London but will help those who, for example, travel about on Green Rover tickets.

Retrenchment Here

PLANS to concentrate Southport Transport Department under one roof have been reduced from £90,000 to £30,000. The first plan, discussed several months ago, was for a substantial extension at the Canning Road depot so that the Hesketh Park depot could be closed. Now a cheaper type of building has been substituted.

Birmingham Concedes 30s. Wage Raise

WITHOUT waiting for the outcome of present national wage negotiations, Birmingham Corporation, which is not a party to the national agreement, is to pay its bus crews an extra 30s. a week.



Bedford SA8 tractor and Interconsult dual-spherical container trailer for delivery of hydrated lime (see story)

off in lieu of Boxing Day. Both are paying wages at time and a half for December 27. There is also talk among provincial employees, both company- and municipally-employed, of a call for an inquiry into their wages and working conditions, along the lines of that which is being pressed by some London busmen. A petition signed by 145,000 Londoners, demanding a public inquiry into "rapidly deteriorating" bus services, was presented to Mr. Marples, the Minister of Transport, at the House of Commons last week by two Labour M.P.s, Mr. R. J. Mellish (Bermondsey) and Mr. E. G. M. Fletcher (East Islington).

L.T.E. Country Area Timetables

LONDON Transport has experimentally put on sale area timetables for Country bus and Green Line services, which have hitherto been published for the use of bus officials only. These timetables have been produced in five different books to cover the services operating in the north and north-east, the north-west, the south-west, the south and the south-east areas of the Country bus and Green Line

The increase will cost the Corporation £500,000 a year. Mr. W. H. Smith, Birmingham City Transport general manager, said: "The idea is to enable us to recruit the right types of employees and to get a more stable staff than we have been able to during the past 15 years." Even though there is a recession in the motor industry, recruiting in Birmingham has continued to lag well behind requirements, and the department is short of 800 staff.

Bulk Lime Carrier

ILLUSTRATED on this page, the self-supporting semi-trailer container built by Interconsult (London), Limited, Slough, for Hall and Co., Limited, constitutes twin spherical containers with a volume of 550 cu. ft. for a load capacity of 8 tons of hydrated lime on daily runs. The same self-supporting containers, if mounted on four-wheels-in-line axles and with a suitable tractor, are capable of transporting 15 tons of cement. The design permits bulk handling and transit of powdered or granular materials at a reduced cost per ton load carried. Additional advantages are to be found in the load-

ing and discharging of the materials. In this instance a Wellworthy compressor is mounted on the Bedford tractor chassis and supplies the pneumatic power for discharging; the compressor is driven off the power take-off via the gearbox. The main air delivery pipe has quick-release couplings and is connected to aeration pads on both containers. As an alternative an independent engine-powered compressor may be fitted. The spherical containers are manufactured in steel and welded integrally. The rear frame is supported on the rear axle suspension, the front frame is mounted and carried on reinforced steel plates, carried on the tractor fifth wheel coupling.

T.R.T.A. Secretaries Exchange Notes

A full-day meeting of divisional secretaries of the Traders Road Transport Association was held at Roadway House, London, last Wednesday. The purpose, as with previous meetings of this kind, was to afford an opportunity for an exchange of views and a general discussion on a large variety of topics. Mr. H. R. Featherstone, the national secretary, presided.

Blackpool Bus Pleases

IN the first few weeks of operation the Blackpool Corporation experimental Leyland pay-as-you-enter double-deck bus has been winning high praise from both drivers and conductors and passengers. What little adverse criticism has reached the transport undertaking has come from women who, carrying either children or shopping, found it inconvenient to pay their fares before they were seated, it is reported.

Showing the T.R.T.A. Badge

MEMBERS of the Traders Road Transport Association can now have 3½-in. dia. badges made of a tough laminated plastic for their vehicles. They are for fixing to radiator, bumper bar or other part of the vehicle. "In these days of excessive traffic restrictions," says the T.R.T.A., it is more important than ever to both members and the T.R.T.A. that members' vehicles should be "visibly identifiable" with the Association.

Swing from Buses to Trains

SCHEDULES staff of the Central S.M.T. Co., Limited, are understood to be studying a report submitted by teams of inspectors on the effect of the new Clydeside electric train service on its routes to Balloch and Helensburgh. In the six weeks that the ill-fated electric service was in operation it is reported that thousands of workers who used the bus services transferred to the electric trains.

Bus and Coach Developments

The Birmingham and Midland Omnibus Co., Limited, has applied for permission to run a twice-daily return service between Banbury and Buckingham and an express motorway service between Birmingham and London Airport.

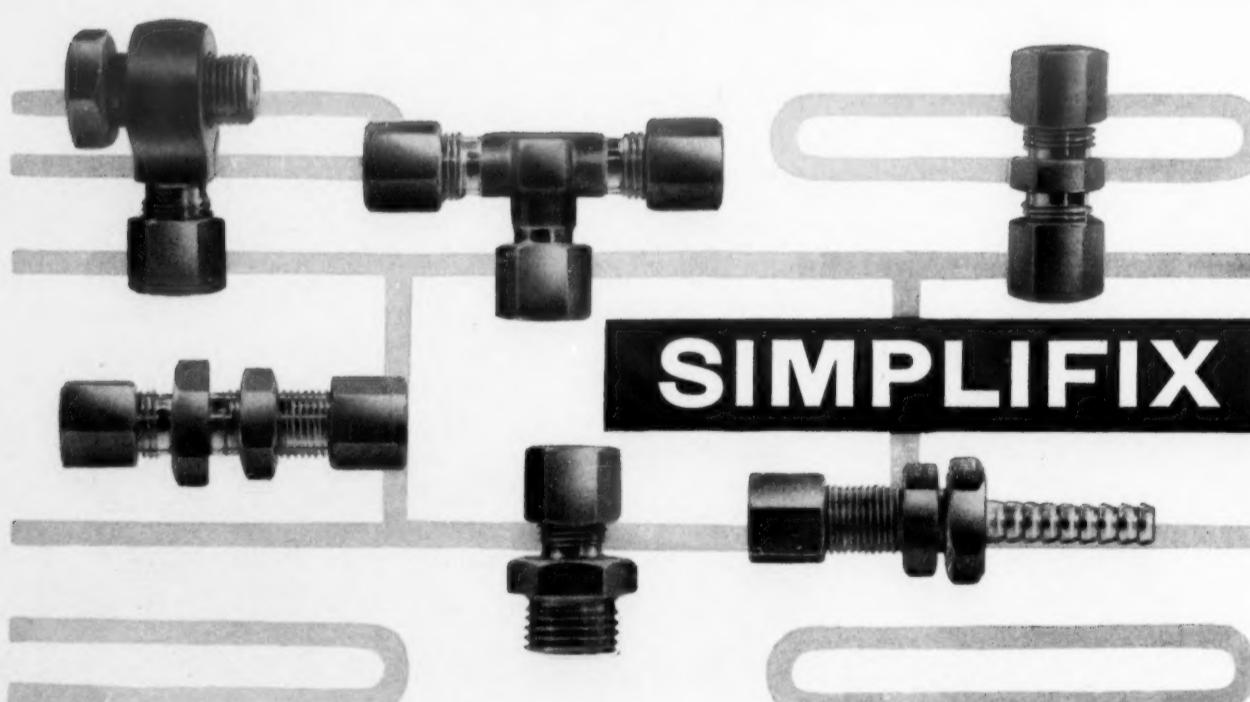
Buckmaster Garages, Limited, of Leighton Buzzard, has requested permission to operate a summer Saturday coach service between Far Bletchley and Bognor Regis.

The United Counties Omnibus Co., Limited, requests permission to extend its Northampton—Luton service to London and to operate new service from Northampton to Corby.

The North-Western Road Car Co., Limited, has applied for permission to run a twice-daily service from Biddulph to Congleton.

Star Coaches, of Biggleswade, request permission to operate a service from Bedford to Biggleswade.

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TRANSPORT SURVEY BY TRADERS

Devotion to Competition and Flexibility

IEWS OF CHAMBERS OF COMMERCE

THE principles underlying the approach by the Association of British Chambers of Commerce to a national transport policy were defined in the resolution adopted by the 1959 annual general meeting. In this the conference affirmed its belief that a freely competitive transport system best serves the nation in its general economy and its commercial efficiency. To that end, it urged that users should remain free to employ the form of transport most suitable to their commercial needs, including their own C-licensed vehicles, when that method achieves the greatest overall economy for them. The A.B.C.C. has now published a study of the national transport system, putting forward remedial proposals. This, however, is not a policy document on behalf of chambers of commerce, but a contribution to discussion of the issues.

The present structure, it says, is unbalanced because it is sharply divided into a public sector operating at a loss, and a private sector operating at a profit. The Association is concerned to ensure that no attempt is made to balance the finances of the public sector by legislative restriction of either element in the private sector. It prefers to see a commercially healthy railway system, and to this end has collaborated with the British Transport Commission in talks which have led to greater local co-operation between chambers and railway officers. The Association regards it as most vital that the form of state contribution to the railways should be such as to retain a fair competitive element and one in which there will be every incentive for the railways to be efficient.

In spite of the obvious improvements in the commercial attitude of British Railways, "they cannot easily live down the reputation for unreliability, and the experience of the Association is that there is still much scope for improvement in some areas and in some specific activities." The wide variety of containers now offered by railways and the special types of rolling stock provided are not always fully known to traders. Further, some traders do not appreciate that district officers now have the authority in many cases to quote immediately for traffic offered. In many areas there is a need for the railways to be more active in publicising their facilities rather than waiting for traders to come to them.

Freight Service

The efforts of the commercial officers, no matter how dynamic, will be wasted if they are not supported by a reliable service. The Association has welcomed improvements represented by such services as the export expresses, but feels that such quality should be aimed at for all traffic. British Railways should aim to clear consignments from depots daily. It is felt that the modernisation plan, even in its revised form, may take too long term a view of the cure for current problems, and there should be more concentration on prospective short-term gains, such as those arising from traffic normally carried by rail, i.e. long-distance or bulk traffic. High priority must be given to continuous braking systems together with automatic coupling, so that really fast freight trains become a reality. Fears have been expressed that the railways have paid insufficient attention to the particular problems of private siding traffic, which can provide a door-to-door service comparable with that offered by road transport. Concentration of the system into railheads should improve the through-loading of smalls traffic and economise in train-miles.

The maximum charges scheme introduced in 1957 has been successful in achieving its purpose in relating charges to costs and by giving more commercial freedom to railways. Charges have increasingly become related to competitive prices and the extent to which the railway officers are securing the optimum revenue is dependent on their assessment of competitor's rates and ability to carry. To be consistent, users who welcome railway competitive freedom cannot deny them the right to obtain maximum revenue where they are in a strong competitive position such as regards peak commuter traffic. If the result is to raise fares beyond a level which is regarded as socially reasonable, then the community ought to determine the right level, and make up the difference. The conclusion on revenue is that there is scope for increasing revenue by dynamic salesmanship, by better liaison between the commercial and operating departments, by improved service, by better understanding of the customer, and greater study of the competitor, and finally by removal of restrictions on passenger charges.

There are elements in railway costs which reflect the quality of management, and elements which essentially arise from a community decision to retain a railway system. The importance of segregating these is stressed, because there is a generally accepted view that an annual subsidy will be necessary, and management incentive must be maintained. A greater infusion of cost consciousness into the local manager is essential to support his commercial activity and, to this end, he must be provided with a more detailed appraisal of variable costs.

The Management Structure

It would be preferable if the Commission were brought to an end, and a Railways Commission created, as the affairs of British Railways on their own are quite big enough to warrant the full-time attention of men of the highest calibre. To ensure a supply of efficient officers it is necessary to provide a salary structure comparable with large commercial enterprises and to promote on the basis of merit, ability and achievement.

The function of the Commission should be to act as liaison between autonomous regions and the Minister on matters affecting the relation of railways to other transport media, and matters of finance affecting the Government, particularly in relation to the justification of subsidy. It should be able to offer high-level technical advice, provide

a central office for inter-regional accounting and such matters as truck utilisation and generally co-ordinate the relations of the regions one with another, but it should not seek to manage them. Arrangements to ensure effective co-operation with the bodies responsible for docks, shipping services and road transport hitherto controlled by the Commission, so far as such services were necessary links in the same chain, would be essential. The area boards should be strengthened by the inclusion of senior railway officers.

London Transport rail and road services alike suffer from peak period pressure, and would benefit from a more positive reaction to their plea for office-hour staggering as recommended by the London Chamber of Commerce.

The bus service is so much a victim of the general road conditions in London that it can really benefit only from drastic improvements in the availability of road space.

There is a strong social case for increasing the number of Underground systems, and also for increasing the number of buses in service. The hotels and catering unit of the Commission's activity is almost entirely ancillary to the operation of the railways. The 1959

accounts show a fair profit on refreshment rooms and a marginal profit on hotels, but a loss on restaurant cars. The restaurant car service is essentially part of the amenities of passenger travel, and the revenue could probably be increased. The control of hotel and catering services should be decentralised to the railway regions.

Rural Bus Services

The rural area passenger transport problem has been exacerbated by the closing of branch railway lines. It should be practicable to encourage small local bus operators by a relaxation of the licensing system, giving them the opportunity of making a profit by permitting them to carry mails, parcels and school children, as well as the normal fare-paying passengers. The intended effect is to provide a better service for the outlying districts, to provide a revenue for the small man sufficient to yield him a profit.

It is not felt that there is any virtue in the B.T.C. continuing to have a financial interest in the Tilling, Scottish or B.E.T. groups. The public interest is in the hands of the Traffic Commissioners who should be encouraged to develop a more liberal licensing policy and a competitive interest where possible. The problem of the London Transport area of operation requires further study.

British Road Services

In an atmosphere of competition since its dismemberment, in which it has to make the same case as its competitors for licences, British Road Services has reorganised itself into a marginally profitable unit, although not strong enough to support capital liabilities. Its structure as a national road haulage network, particularly in the field of parcels, makes it desirable to retain it as a unit, and its financial position indicates continuation of public ownership. There has not been the degree of co-ordination with the railways as intended. This is because co-ordination as originally conceived did not work, but there is probably now a growing field in which genuine co-ordination can develop. The traditional collection and delivery services and the feeder services that will be increasingly necessitated by streamlining the railway system could be performed by railway-owned vehicles but there is scope for contracting out some of this work to B.R.S.

It is because of this co-ordination potential that it is recommended that B.R.S. should be subject to the Railways Commission in the same way as a railway region. It should be permitted to develop its haulage business in open competition with other hauliers and it should be as a profit-making organisation without subsidy and with its charges to British Railways on an economic basis.

The Independent Haulier

A review of the goods vehicle licensing system is needed. In the meantime there should be a more liberal reception of applications by the licensing authorities, with objections and the need to give evidence reduced to a minimum. Above all, the abolition of any locational qualification as a basis for a licence is essential. Industry is mobile and traffic flows change, and transport must follow the flows. The C-licence operator carries his own goods in his own vehicles because he deems this to be the most suitable way of transporting his goods in relation to his general commercial requirements. As a good business man he should always be seeking, and always ready to find, another way of achieving as good a result at a lower cost.

The present position of the B.T.C. ports is unsatisfactory. They do not represent a national ports structure, as so many of the major ports are not part of them. An expert study of the B.T.C. ports and the individual docks, is recommended to assess which should be retained and developed, and the very important element of strategic need must be taken into account. Where the retention of uneconomic ports is justified on strategic grounds, then a case for subsidy must be made. The term strategic in this instance must include consideration of the effect on specified trades or industries dependent on an uneconomic port or docks. The study should include the packet ports which, since nationalisation, have been retained under railway management.

To achieve commercial stability, British Waterways should be freed from association with the railways and become an autonomous body. It is desirable, by virtue of its various activities, that it should be publicly owned, and should report to a Central Waterways Advisory Authority. Its responsibility should be to operate the class A and class B waterways, and to develop or eliminate facilities as commercial considerations dictate. It should also be empowered to operate its own craft where it is potentially profitable to do so.

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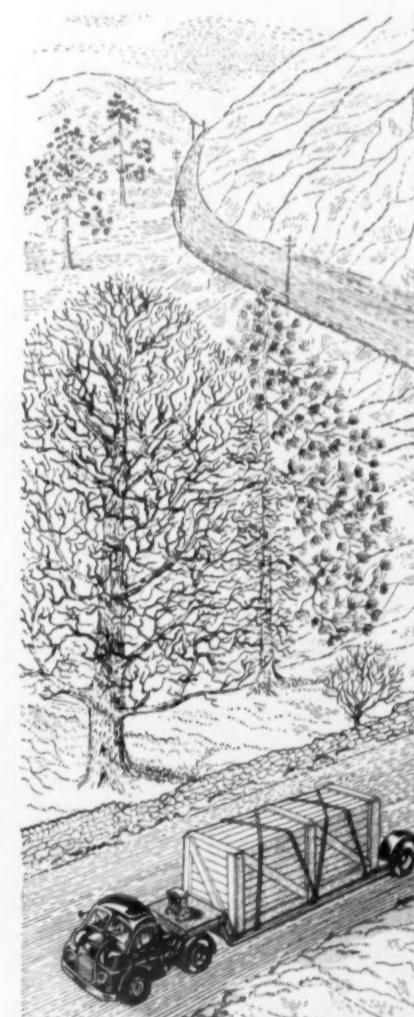
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APPLICATIONS are invited for this appointment from appropriately qualified persons not exceeding 55 years of age. The salary scale is £2,400 rising by four annual increments of £75 to £2,700. Forms of application and terms of conditions of appointment may be obtained from the undersigned to whom applications should be delivered not later than January 7, 1961.

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Town Hall,
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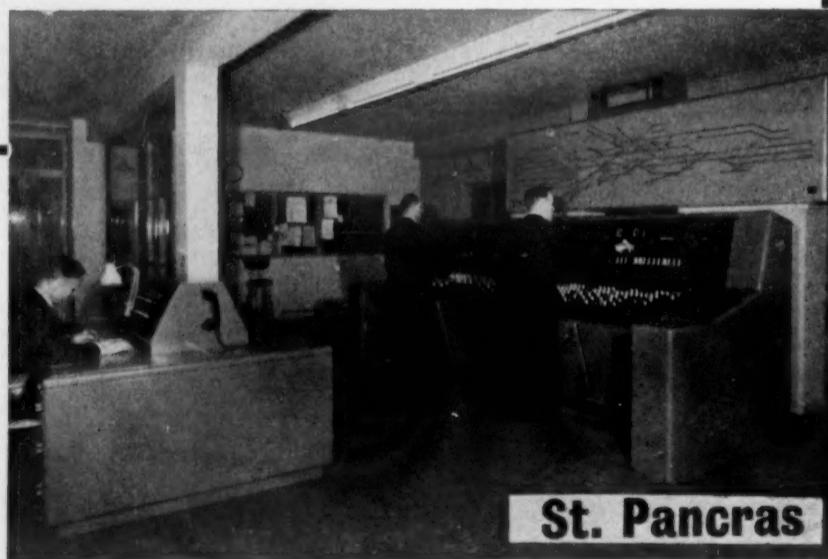
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The Signalling at the London Midland main line terminal station at St. Pancras, is a Westinghouse O.C.S. installation, controlling 205 routes, with electro-pneumatic operation of the 61 pairs of points.



St. Pancras

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Westinghouse Brake & Signal Co. S.A. (Pty.), Ltd., Johannesburg. Agents: Bellamy & Lambie, Johannesburg

NEWS FROM ALL QUARTERS

Respite for Pennine Line

No final decision has yet been given on British Railways proposal to withdraw the passenger services between Penrith and Barnard Castle. It will now be postponed for another month. The line has been losing £36,000 a year.

xxxx

New Harbour at Bluff

Lord Cobham, Governor-General of New Zealand, opened a new harbour at Bluff, at the southern tip of South Island. The harbour was built at a cost of £3½ million to serve the growing export trade of Southland province. It covers 84 acres and will deal with over 400,000 tons annually.

xxxx

Italian Petrol for Britain?

The Italian state-owned oil company, AGIP, may soon be selling its petrol in Britain. A new company has been registered in London, and, while its objectives are suitably vague, there is little doubt that this is the first move in a scheme to break into the British oil market.

xxxx

Railway Bid Inquiry

The United States Government is reported to be planning to investigate the bids by Chesapeake and Ohio Railway and New York Central Railroad to control Baltimore and Ohio Railroad. This is due to a possibility of antitrust aspects. The move would mark the start of a new campaign to weigh all future rail merger proposals for their effect on competition.

xxxx

German Airports Buy British

Decca weather radar is being fitted at Frankfurt, Hanover, Munich, Schleswig and Hamburg airports. Work has already been finished at Hamburg and Frankfurt and the radar will be evaluated by the German Meteorological Service prior to being taken over by the local aviation weather services. The radar being used is Decca Type 41, which has a range of 200 miles.

xxxx

Australian Demand for Hovercraft

Mr. D. Hennessey, chairman of Hovercraft Development, Limited, is visiting Australia to discuss with transport interests the types of air-cushion-riding hovercraft best suited to their requirements. Australia will be a major potential market for hovercraft, particularly for transporting cattle and for use as harbour ferries. A great number of inquiries have been received from the Commonwealth.

xxxx

New Pullman Service Deferred

The new midday journey of the diesel Midland Pullman, which was to have run from St. Pancras to Leicester and Nottingham from January 1, has been postponed. This was decided by the London Midland Region and the Pullman Car Company so that more time could be given to negotiations with the National Union of Railwaymen, whose executive committee decided on December 14 that they would not staff the service. The Midland Pullman will continue to run as a morning Manchester—London train with an evening return service despite the postponement of the midday run.

xxxx

Strong measures to reduce road accidents are embodied in a new Japanese road traffic ordinance which took effect on December 20. Turning traffic must give way to pedestrians and the maximum fine for failure to do so has been raised from Yen 3,000 (£3) to Yen 30,000 (£30) with double the amount if the driver is under the influence of drink. Drivers turning right at intersections must do so before the central point and not cut across traffic making the opposite turn—there are certain specifically designated exceptions. The fine is raised from £1 to £10. Vehicles must stop at unmanned level crossings—these represent 90 per cent of the total of 71,810—unless there are automatic warning signals.

EARNING THEIR KEEP



Two of Messrs. Tough & Henderson's "TRUSTY's" operate under contract "A" licence to Messrs. John Dickenson & Co., Ltd., running daily, five and a half days a week, between London and Watford. Under favourable conditions each "TRUSTY" makes as many as 14 journeys a week with loads of up to 16½ tons of raw material.

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COMMERCIAL AVIATION

New Montreal Air Terminal

B.O.A.C. TRANSPACIFIC SERVICES

A NEW air terminal has been added to the passenger facilities at Dorval Airport, Montreal. It is said to be the largest terminal under one roof. The new terminal is 2,131 ft. long, with a control tower eight storeys above the aircraft parking areas. Inside are all the facilities—shops, hairdressing salons and snack bars—which one would expect to find in a modern airport terminal. There is an excellent restaurant, which is decorated in a tasteful, if ultra-modern, style. In a building of its size, distance is a problem. Long-distance jet flights are served by a finger, which is reached from any one of 12 gates. With over a quarter of a million aircraft movements annually, Dorval warrants a new terminal to replace the previous one.

B.O.A.C. Reacquires Subsidiary

B.O.A.C. Associated Companies has made arrangements to reacquire the whole of the shareholding of Bahamas Airways from Skyways (Bahamas). Bahamas Airways is currently making a loss and if B.O.A.C. had allowed them to lapse, their operating licence would have lapsed and B.O.A.C. would then lose a valuable feeder airline.

Boeing for El Al

El Al, the Israeli national airline, will commence jet services in January with a Boeing 707 leased from Varig. It will fly Lydda—Paris—London—New York on a weekly service, which will increase to twice weekly in mid-February. When El Al acquire their own 707s, services will be flown four times a week.

Singapore Air Show

An international air show will be held at Paya Lebar Airport, Singapore, from April 8-16, 1961. It is intended as shop window for South East Asian aircraft operators. Helicopters, civil and military aircraft will be on display. All inquiries should be addressed to Masters (1959), Limited, 16c Cecil Street, Singapore, 1.

Silver City Cut Car Ferry Rates

Silver City Airways has announced a three-point plan to reduce the cost of flying cars abroad in 1961. This will be done by the complete abolition of peak-day surcharges during weekends in July, August and September, and will mean an average saving of £4 per car on 1960 peak-day rates.

Japan Air Lines to Fly to Europe

Japan Air Lines will inaugurate their new Polar route service into Europe on June 1, 1961. J.A.L. will operate Douglas DC-8's from Tokyo to Paris via Anchorage, Copenhagen and London. This will be the first service by an Oriental airline to link Europe and the Far East. A southern route to Europe via India using Convair 880M jets is visualised.

B.O.A.C. Transpacific Services

B.O.A.C. has recently introduced the Boeing 707 on the transpacific service, replacing the Britannia. This provides not only the fastest scheduled service between Tokyo and Hong Kong but also marks the opening of the Corporation's round-the-world service by jetliner, connecting with the Comet 4 flying Eastabout to Tokyo and Hong Kong.

Eurocontrol Mooted

Representatives of Great Britain, West Germany, France and the Benelux countries have signed a convention with the ultimate aim of controlling aircraft flying above 20,000 ft., the present maximum control height. At present civil and military control in parts of Europe are relatively unco-ordinated and separate systems exist for NATO and national air forces.

North Stars Retire

The last Canadair C-4 North Star of Trans-Canada Air Lines has retired from passenger services. Operated by B.O.A.C., the R.C.A.F. and Canadian Pacific Airlines as well as T.C.A., the North Star, or Argonaut, as B.O.A.C. called it, was one of the first transports to come into operation after the war. North Stars will continue to operate cargo services in Western Canada until the Vanguards go into service.

T.W.A. Finance for Convairs

The 20 Convair 880 jets which Trans World Airlines has on order will be introduced on internal American routes by the end of February. This is possible because of a long-term investment policy which involves T.W.A. going outside the present arrangement in which they hire the aircraft from the Hughes Tool Company. A group headed by nine banks and the Hughes Tool Company will now finance these aircraft. The 17 Boeing 707s at present hired from the Hughes Company will also be bought.

Cathay Pacific Hire Britannia

Cathay Pacific Airways, Limited, of Hong Kong, has hired a Bristol Britannia 102 from B.O.A.C. It has been repainted in C.P.A. insignia and is being operated by B.O.A.C. crews. Cathay Pacific is hiring the Britannia while its two Electras are being modified at the Lockheed works, Burbank, California. These modifications are a direct result of the series of fatal accidents which Electra aircraft have suffered recently. C.P.A. hope that the addition of the Britannia to their fleet of four Douglas aircraft will enable these modifications to go ahead while causing a minimum of inconvenience. When the two Electras return from Burbank in January they will be among the first to be altered to the new specification that are in service.

First Comet for Middle East Airlines

The first de Havilland Comet 4C for Middle East Airlines was handed over to Sheikh Najib Al-Aswad, the chairman and managing director, at Hatfield on December 15. The managing director of de Havillands, Mr. H. G. Sturgeon, said that de Havillands were proud to be delivering their first Comet to M.E.A. on time. It was about to begin its final acceptance trials and would fly to Beirut on December 20. In reply, Sheikh Najib stated that the Comets were the natural successors to their Viscounts. Now M.E.A. had their Comets, he said, the problem was to obtain an economic load factor and a higher utilisation. In the last five years M.E.A. had increased their revenue by 500 per cent and their load and capacity ton-miles by 542 per cent and 530 per cent respectively. M.E.A.'s aim now was to lower the fares and increase the flights to obtain a higher rate of utilisation. The Comet will go into service early next year.

SECRETARY-GENERAL
OF THE U.I.C.



M. Louis Armand

• • • •

As from January 1, 1961, M. Louis Armand is to take over the duties of secretary-general of the International Union of Railways. He was born at Cruseilles (Haute Savoie) in 1905. After completing his secondary education at Annecy and Lyons, he entered the Ecole Polytechnique in 1924, and came out second, and first of the Ecole des Mines. In 1934 he joined the Paris-Lyon-Méditerranée Railway Company and held various senior posts, which gave him a very wide knowledge of all aspects of the railway industry. During the last war he was closely associated with the work of several resistance movements, and was head of the "Resistance-Fer" group. In 1946 M. Armand was appointed assistant general manager of the Société Nationale des Chemins de Fers Français. On June 1, 1949, he became general manager of the S.N.C.F., and in 1955 chairman of the board of directors. In these offices he paid special attention to the completion of the re-organisation of transport in France and continued the productivity policy instituted since the war. In particular his name will be associated with 50-cycle electrification and with a process for prolonging the life of the boilers of steam locomotives by the T.I.A. feed water treatment process. From October 1, 1951, to December 10, 1958, M. Armand was chairman of the International Union of Railways. He was partly responsible for the Europ wagon pool and for the T.E.E. express service network, among other international developments. In January, 1958, at the request of the French Government, he became chairman of Euratom and remained in that office until the end of February, 1959. M. Armand is an Honorary Knight of the Most Excellent Order of the British Empire (K.B.E.), a Grand Officier of the Légion d'Honneur and holds various other high French and foreign decorations.

IN PARLIAMENT

Accident Rate on M1

RAILWAY SUPERANNUANTS

THE total number of casualties on the M1, A5 and A45 roads in the first year after the motorway was opened was 20 per cent below the figure for A5 and A45 alone in the preceding 12 months, said LORD CHESHAM, Joint Parliamentary Secretary, Ministry of Transport. Over the same period there was an increase of 6 per cent in accidents and casualties on all other roads. The accident rate in terms of vehicle-miles is for M1 about half that of all other roads. The average daily flow at a point midway along the M1 is 11,900 vehicles, compared with 4,900 at a similar point on the A5.

Trolleybus Bill

DAME IRENE WARD has secured an unopposed second reading for her Bill to make it obligatory for the drivers of trolleybuses to report accidents in the same way that drivers of motor vehicles are obliged to do. It is entitled the Road Traffic (Trolley Vehicles) Bill. Trolleybus drivers are stated to be exempt at present by virtue of an Act of 1871.

Railway Superannuants

MR. MAPP asked the Minister of Transport what would be the estimated cost to the British Transport Commission if supplementary assistance was authorised for railway superannuants up to the basis of the present National Insurance pension and the estimated cost based on the increased pension operative in April next year. MR. E. MARPLES: "I am informed by the Commission that the estimated annual costs would be about £350,000 and £600,000 respectively."

Euston—Crewe Electrification

MR. K. ROBINSON asked the Minister of Transport about the future of the plan to electrify the Euston—Crewe main line. MR. E. MARPLES said that the B.T.C. reassessment of the London Midland Region electrification scheme had been under urgent examination by his Ministry, in consultation with the Commission, which had recently provided a statement of the proposed phasing of expenditure for the period up to 1966. A further expenditure of some £138 million was involved. "I am as anxious as anyone to reach an early decision in this matter, but I must relate a scheme of this magnitude to the other items in the four-year programme."

Dissatisfaction with Covent Garden Bill

Although the Covent Garden Bill, proposing the rebuilding of this market on the same site, was given a second Commons reading, about 10 Conservative M.P.s abstained from voting in defiance of the Whip. Their main objection was that the scheme was indefensible on the grounds of traffic congestion and town planning. The Minister of Agriculture, MR. C. SOAMES, said that a survey of traffic conditions in and around Covent Garden had revealed that actual market traffic was not a major factor in traffic flow in roads around the market area. The total number of vehicles using the market daily was 3,250. The Government majority was only 58. The Bill now goes to a Select Committee.

FORTHCOMING EVENTS

January 2.—Inst. T. (Metropolitan). L. James, "The Work and Problems of the British Transport Police," 80 Portland Place, 8 p.m.
Inst. T. (East Anglia). J. Madgett, "The Role of the Minibus in Transport," Eastern Counties Omnibus Co. Limited, offices, Norwich, 6 p.m.
January 3.—Inst. T. (Portsmouth). J. F. Gilmore, "Railway Traffic Control Arrangements at Portsmouth," Solent Hotel, Southsea, 7 p.m.
I.R.T.E. (Western). W. A. Kirk, "Air Brakes for Commercial Road Vehicles," Royal Hotel, Bristol, 7 p.m.
January 4.—Inst. T. (South Western). Debate. Great Western Hotel, Exeter, 12.30 p.m.
Inst. P. Prof. R. H. Garner, "Pre-flame Reactions in Diesel Engines: Part V: A Study of Temperature, Pressure and Ignition Delay," 61 New Cavendish Street, W.I., 5.30 p.m.
S.R.I.D.S. T. Clyde Britten, "Personal Reminiscences of Dugald Drummond and his Locomotives," Chapter House, 11, Thomas More Street, S.E.1, 6 p.m.
January 5.—Inst. T. (Merseyside). M. Arnett Robinson, "The Future of Coasting Shipping," Chamber of Commerce, Liverpool, 6.30 p.m.
I.N.A. A. Hunter, Third Amos Ayre Lecture, 10 Upper Belgrave Street, S.W.1, 4.45 p.m.
I.E.E. J. S. Forrest, "The Application of Electronics to the Electricity Supply Industry," Savoy Place, W.C.2, 5.30 p.m.
I.R.T.E. J. H. Stoneman, "Servicing of Electric Equipment," Exeter City Fire Brigade, Exeter, 7.30 p.m.
Ae.S. R. J. Lees, "Gyroscope and Pendulum Modern Travel Agents," Lecture Theatre, 4 Hamilton Place, W.1, 3 p.m.
January 6.—Inst. T. (Western). Papers by graduates and students. Dock Office, Bristol, 1.15 p.m.
January 6-7.—R.A.S. "Rocket Propulsion" symposium at Cranfield. Joint meeting with the College of Aeronautics and the British Interplanetary Society.

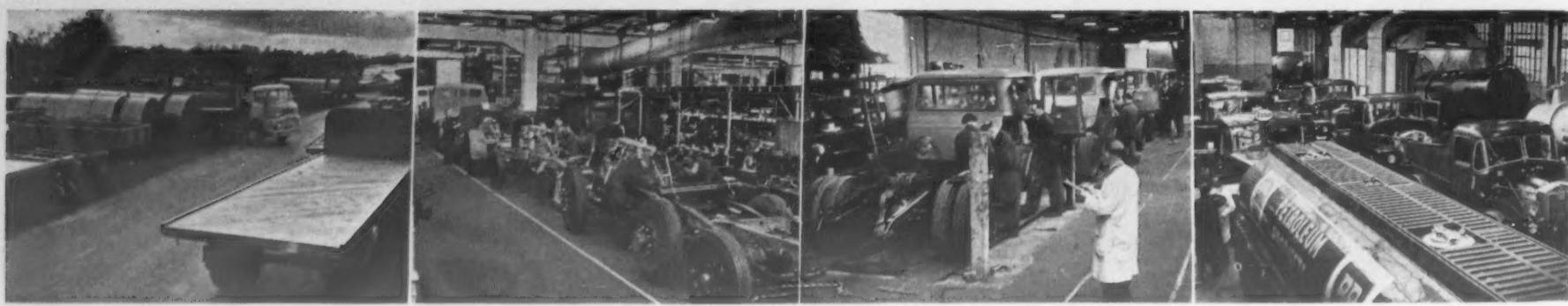
NEW FLIGHT SYSTEM

Farnborough Developments

A NEW system of flight control whereby a pilot can control his aircraft more safely, simply and efficiently is shown by the "Head-Up" system, which has been developed by the Royal Aircraft Establishment, Farnborough. The essence of this system is that the information is relayed from a group of cockpit instruments on to the pilot's windscreens in symbol form. This display shows the pilot when to alter direction, height, or attitude without having to look away from his windscreens. These symbols are matched in focus with the forward view so that the pilot does not need to re-focus his eyes. The system has been successfully flight-tested.

The R.A.E. visual flight simulator has been extensively used in developing this system, and enables it to be demonstrated in the laboratory. The chief feature of the simulator is an artificial picture of the forward view during flight. This picture is so arranged that the movement of the controls varies the picture. It is not an air-to-ground photograph.

The system itself, which has been developed by Mr. J. M. Naish, of the Flight Display Department, consists of a circle, which represents the aircraft. When the aircraft is performing the required manoeuvre correctly a series of diminishing lines will centre on the circle. The advantage of this system over the Zero Reader is that the Zero Reader does not show the pilot what the aircraft is doing. The system can be learned in four minutes by a trained pilot and accuracy is twice as good in following flight directions. This is, altogether, a remarkably efficient system.



A view of the finished semi-trailer park showing the wide variety of production, with a Leyland Comet tractor picking up a semi-trailer for delivery; final stages of assembly on the Highwayman tractor line; part of the conversion line where various makes of tractor (in this case TK Bedfords) are fitted with Scammell automatic coupling gear; and, extreme right, a section of the paint shop where finish coats and signwriting are applied

HEAVY-DUTY VEHICLE WORKS REORGANISATION

Scammell Watford and Moor Park Factories

OVERALL EXPANSION OF PRODUCTION

NEARING completion at the Watford and Moor Park factories of Scammell Lorries, Limited, is the first stage of a large-scale reorganisation and production development scheme, which is already producing substantial increases in vehicle and trailer output. Within the last few months £120,000 has been spent on the scheme, which includes new plant and extensions totalling 70,000 sq. ft. Car parking areas have been resited to make room for a new factory building that will be put in hand as soon as planning permission has been obtained. The immediate object behind the scheme is to make fuller use of the existing overall factory area and labour force to boost production to meet the greater demand for Scammell vehicles and trailers.

Export Sales Network

This demand has increased overseas since Scammell Lorries, Limited, had the advantage of the Leyland Group export sales network and very large quantities of specialised four- and six-wheel-drive oilfield-type lorries and tractors are now operating in the major oilfields of the Middle East and other parts of the world. Numerous orders have been received for the Scammell Highwayman, in particular as articulated bulk liquid carriers, and among a general increase in other types there has been a large step-up in orders and production for semi-trailers in capacities of 8 to 17 tons.

These factors, coupled with the recent introduction of such attractive designs as the 10-wheeled articulated Trunker and the Sherpa dumper, as well as the heavier types of trailers, have resulted in a record number of orders this year. In fact, orders in hand at the Scammell factories are at peak level. At the moment they are over 150 per cent higher than at the financial year ending 1959, and over three times higher than at the 1958 financial year end.

Automatic Coupling

Ever since 1932, when the Scammell automatic coupling was introduced on the mechanical horse, a substantial proportion of the company's business has been built around this coupling on the mechanical horses and on four-wheeled tractors and trailers. Up to date, 125,000 automatic couplings have been sold. In recent years the design staff has been concentrating more on the heavier couplings and the company is beginning to reap the sales benefits from the S.M.M.T.-S.A.E. standard fifth-wheel coupling which was placed on the market 12 months ago. This unit is now available for 17, 20 and 24 tons gross ratings.

As an indication of the step-up in production that has been achieved since Mr. D. G. Stokes became

Palletisation and the use of electric and fork-lift trucks have been put in operation to facilitate handling and to make the best possible use of the existing floor space. In the case of the assembly bays, additional floor space has been gained by building flyover floors, which are used for component storage and in some cases as small unit assembly sections, such as for electrical units. Chutes are later to be built from these flyovers so that assemblies can be transferred easily to the main vehicle assembly floor.

New Machine Shop

By increasing production by these and other means, overheads are being spread over a larger output, thus enabling the selling price to be more competitive.

in the production of new types of commercial vehicles. Scammell was the first and still remains the only British manufacturer of complete matched articulated vehicles. Foreseeing the need for goods vehicles of a much greater carrying capacity than those with capacities of up to 4 tons in use during and after the first world war, experimental and design work was started in 1921 on the now popular tractor and semi-trailer combination. Although unorthodox, the vehicle proved an instant success and Scammell Lorries, Limited, was formed in 1922 with an authorised capital of £250,000 to take over the production of this and other road vehicles.

At that time the main production vehicle was a chain-driven solid-tyred articulated six-wheeler of 7½ tons carrying capacity. Right from the begin-

horse tractors have been delivered. British Railways alone operates approximately 10,000 and railway companies in various parts of the world also use substantial quantities. In connection with the mechanical horse in particular, trailers are operated at an average proportion of three trailers to one tractor.

Economy in Handling

A further logical development has been the fitting of the instantaneous coupling gear to various makes of four-wheeled tractors. This enables operators to use the Scarab for handling Scammell semi-trailers at terminals and in other congested areas, the four-wheelers taking over for longer journeys. The greater economy in handling by this method has resulted in the sale of over 80,000 of these Scammell semi-trailers for payloads of up to 12 tons in the past 25 years.

A recent Scammell development is a heavy-duty fully automatic coupling for its maximum-capacity articulated vehicles. An instantaneous telescopic-leg type, it represented a great advance on normal couplings, being particularly suitable for semi-trailers which are often parked as temporary storage containers or left at depots by long-distance hauliers for simple and speedy changeover from one tractor to another.

Bulk Tankers

Keeping pace with demands for the bulk transport of materials in powder, liquid and gaseous forms, Scammell has produced semi-trailers designed for these, the loads being air-conditioned, frozen or heated while on the move. Gases and liquefied gases are catered for by special pressure containers and frameless tankers capable of conveying loads at pressures up to 3,000 p.s.i. and temperatures down to minus 183 deg. C.

Where abnormal weight or size is the problem, Scammell has provided the solution with full drop-frame transporters suitable for indivisible loads of 20 to 30 tons. These trailers and all other Scammell semi-trailers are available with various forms of rubber, air and normal steel spring suspension arrangements. For highway operation, the present range of Scammell heavy vehicles includes eight-wheeled tankers and hoppers, machinery transporters for payloads up to 35 tons, and six-wheeled tractors for hauling drawbar trailers with loads of up to 150 tons.

Exports

In the export field, the standard Highwayman tractor and Scarab mechanical horse vehicles have been exported to many countries, including East and South Africa, Australia and the Far East. For oilfield operation in particular the Scammell four-wheel-drive Mountaineer and six-wheel-drive Constructor chassis have been supplied in large quantities, both as oilfield lorries for loads of up to 30 tons for the transport of skid-loaded drilling and other equipment, and also similar chassis in a



Outstanding features of Scammell vehicles are the double-reduction axles of from 9 to 20 tons capacity and, right, the six-speed gearbox, both of which are hand-finished to very precise limits



This applies particularly to special items which are called for by individual operators and which have always been a feature of Scammell vehicles. With the reorganisation, the factory has become more self-supporting by over 5 per cent for these small special fabricated parts. They are now produced in an entirely new combined machine shop and toolroom, where they can be individually built and fed directly to the vehicle assembly line. The machine shop has been planned to allow freedom of movement of parts and it incorporates its own welding booths. Time and motion study has

ning, Scammell built up a reputation for designing and building vehicles to suit customers' individual requirements and operating conditions, but as well as producing these specialised units, the Watford firm also continued developing and improving standard vehicles and many of the innovations introduced have since passed into general usage for their contribution to greater safety and efficiency.

Frameless Tanker

A frameless tank carrier for bulk liquids was patented in 1926 and the following year saw pro-



A section of the new machine shop in the Watford works extension; semi-trailer frame assembly at the Moor Park works; and close-up views of assembly of Highwayman tractor and, extreme right, a Super Constructor

managing director of the company four months ago, the output of Highwayman and other heavy vehicles has been doubled. Trailer production at the Moor Park factory has increased by 49 per cent during this time.

The reorganisation scheme is being conducted by newly-formed departments directed by Mr. J. Thorpe, works manager of the Leyland Motors Spurrier works, who has been seconded to Scammell for the purpose. Manufacturing processes have been replanned on a system similar to that employed at the Leyland factories. An incentive bonus scheme has also been introduced in collaboration with trade union officials.

In the assembly shops where the bonus scheme has been introduced, the system of quality control has been tightened up. The previous system, under which work is signed for by the fitter responsible for the job, has been maintained. If a skilled fitter is placed on new work, he spends eight weeks with a trained man to ensure that there will be no drop in quality during the changeover period. The flow-line system of production has been introduced for many manufacturing and assembly processes. Highwayman and Scarab vehicles are now assembled on the flow-line principle, so that units move progressively along the two lines.

raised efficiency in the machine shop, as well as in several other departments of the factory.

Most of the physical reorganisation has taken place in the headquarters factory at Watford but plans are in hand for new production techniques at the Moor Park factory, where the trailers are manufactured. In this plant, the replanning of manufacturing operations has already started and production has increased by 49 per cent. Much work of reorganisation remains to be done at Moor Park, but when an altered shop layout, already schemed on paper, is completed, production potential will be doubled.

Among the innovations at the Scammell factories is a suggestion scheme by which employees receive monetary awards for useful suggestions. First payments have already been made under the scheme, which is based on the Leyland pattern. Contributors remain anonymous until an award has been made. So far, about 50 per cent of the accepted suggestions relate to modifications in design that will facilitate production.

Scammell Background

Since the early days of Queen Victoria's reign, the name Scammell has been synonymous with the manufacture of specialised road vehicles. A pioneer

duction of a rigid six-wheeler with an outstanding cross-country performance, the ancestor of current outstanding Scammell off-the-road types. In 1929 the company produced its first vehicle capable of carrying a payload of 100 tons, but an even more important landmark in Scammell history was perhaps the appearance in 1933 of the first three-wheeled mechanical horse, of which many thousands have since been produced.

The Scarab, as it has since been named, is an entirely new version of the original mechanical horse, but although its appearance has been considerably improved, it still retains its original attributes of extreme versatility, manoeuvrability and economy of operation, which have made it a preferred form of road transport for 3- and 6-ton loads on short-haul work.

Automatic Coupling

With the inception of the mechanical horse in 1933 came automatic-coupling and retractable-undercarriage semi-trailers. These new ideas from Scammell enabled a single tractor to operate in turn with any number of semi-trailers, a method of working which proved very successful and economical for short-haul and inter-works transport. Since its inception over 20,000 Scarab mechanical

short-wheelbase version for loads of up to 50 tons for operation in off-road conditions.

The largest of this range is the Super Constructor six-wheel-drive chassis fitted with a Rolls-Royce 250-b.h.p. diesel engine and Self-Changing Gears eight-speed semi-automatic gearbox. These are built to the special requirements of oil companies in all parts of the world and are meeting with great success under the most arduous conditions.

SWISS RAILWAYS

(Continued from page 3)

its eastern end, between Mühlhorn and Murg; and then will follow a complete diversion of the line between its western end and Ziegelbrücke, cutting out the present sharp curve through Weesen, which will have a new station; a new bridge also will be required over the broad Linth canal, the outflow from the Walensee. All that will then remain to be doubled is the 12½-mile stretch through comparatively easy country from Ragaz to Chur, after which the entire 72½ miles from Zurich to Chur will be double track.

(To be continued)

ITALIAN DOUBLE-DECK BUSES

Standee Vehicles for Turin

CHASSISLESS CONSTRUCTION AND AIR SUSPENSION

THE appearance of prototype double-deck buses at the recent Turin Motor Show has confirmed that public transport in Italy has begun to follow the trends foreshadowed in MODERN TRANSPORT of September 24, 1950. Apart from the new limits imposed by legislation on the length of articulated buses, which have been extremely popular as crowd-shifters in all parts of the country, current development in Italy is largely influenced by difficult traffic conditions similar to those experienced in the U.K. The need to provide a high-capacity vehicle which possesses good manoeuvrability in congested streets has made



General view of the Viberti 141-passenger integral double-decker as it appeared at the recent Turin Show

Italian manufacturers break new ground by turning to the double-decker.

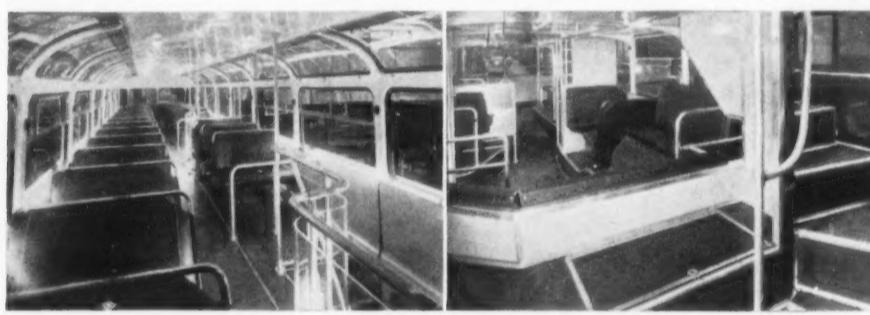
Common to both vehicles shown at Turin were a number of unconventional features; the buses are also distinguished by the provision of an exceptionally large amount of standing space. A chassisless 36 ft. long bus built and exhibited by Aerfer has only 45 seats of which 12 are disposed, in a seemingly haphazard way, about the lower deck,

unusual engine location has enabled low floors to be combined with a conventional centre gangway on the upper deck. The power unit (which had not been installed on the exhibition vehicle) will be a Fiat six-cylinder engine developing 200 b.h.p. in its Holset-turbocharged version, which is to be mounted vertically on the off-side immediately behind the front axle. Both rear axles will be driven through a hydraulic coupling and an electro-pneumatically operated four-speed gearbox. The radiator is mounted in the usual position at the front of the vehicle and the cooling fan is driven by a thermostatically controlled hydraulic motor powered by an engine-driven pump. The bus is equipped with air suspension on all wheels to maintain all step levels at a constant height of 15½ in. irrespective of the load carried.

Although the weight of the Viberti bus was not given to us, it is obvious that the substantial welded all-steel structure makes no concession to weight saving. The clean body design is noteworthy for the large single-piece forward window of the upper saloon and the observation-type roof glazing seen in the show exhibit. It is, however, unlikely that the latter feature will be incorporated in production vehicles. All window bays are of the same width of 2 ft. 4½ in., half drop glazing and top sliding units being fitted on the lower and upper floors respectively.

Passenger flow

Passengers board the Viberti double-decker by means of a single step through an air-operated entrance door, 4 ft. 5½ in. wide, which encloses a large rear platform. This communicates with the lower saloon on the same level, although there is a slightly ramped section above the rear axles. There is a total of 21 seats on the lower deck, all of which are raised above gangway level, and up to 70 standees can be carried. Provision is made for a conductor's pay-desk on the near-side of the

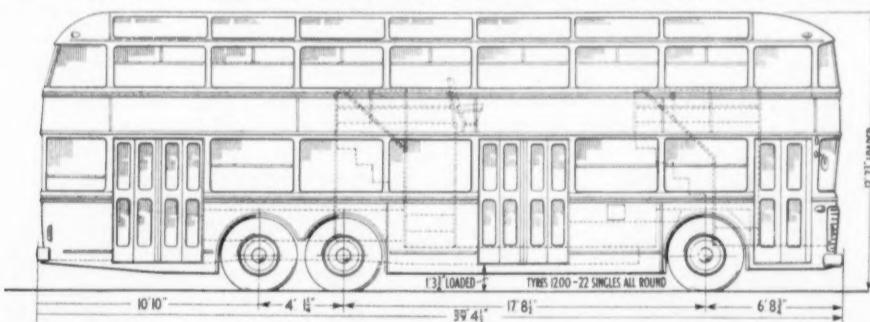


A view of the upper deck, which seats 50 passengers, and, right, at the foot of the exit stairs looking aft, showing the centre-facing seats which are located over the engine compartment.

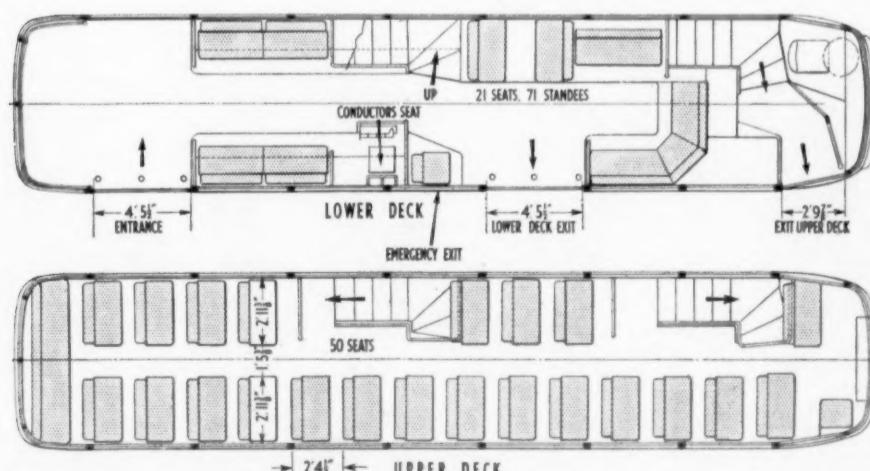
This is on the right

where there is standing room for approximately 100 passengers. The rear-engined Aerfer bus (a horizontal Fiat power unit of 150 b.h.p. is used) presents a somewhat unusual aspect with the roof line at the rear cut at an angle to follow the exit stairs. Orders for this type of bus have already

lower deck, at a position just ahead of the stairs giving access to the top deck. Facing the conductor is a board with indicator lights showing which seats are taken or free on the upper deck. A central exit, of the same width as the platform doors, is provided and further towards the front of the bus



Drawings of the Viberti double-decker showing side elevation and principal dimensions above, and lower and upper deck layout arrangements below. The front upper deck exit is cut off from the rest of the lower deck



been placed by a number of Italian cities and service trials have been arranged for Milan, Naples and Rome.

Viberti Montral

The second unit displayed at the Turin show was the Viberti-built Montral 141-passenger double-decker. This is a six-wheeler with single tyres all round and an overall length of 39 ft. 4½ in., which we believe will make it the world's longest double-deck bus to go into service. For this vehicle too, the adoption of chassisless construction and an

U-shaped group of seats which separates the lower saloon from the front exit area, which is reached exclusively by forward-facing stairs from the top deck.

The driving position is screened by the usual continental tubular guard rail arrangement. The top deck is of conventional layout with an odd touch put in by a single seat turned sideways (to provide legroom), with its back to the window, and positioned at the very front for the other 49 passengers to behold the occupier's profile. Head-

(Continued on page 10)

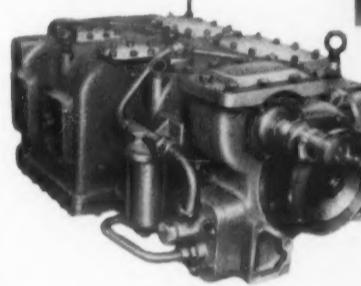
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RV30

EIGHT SPEED
GEARBOX



This tractor built by Robert Wynn & Sons, Ltd., is capable of moving loads of well over one hundred tons. Fitted with a RV.30 eight speed gearbox the vehicle performs superbly under all road conditions, gear changes being made with the utmost ease.



The RV.30 eight speed gearbox is based on the tried and proved "Wilson" gearbox.

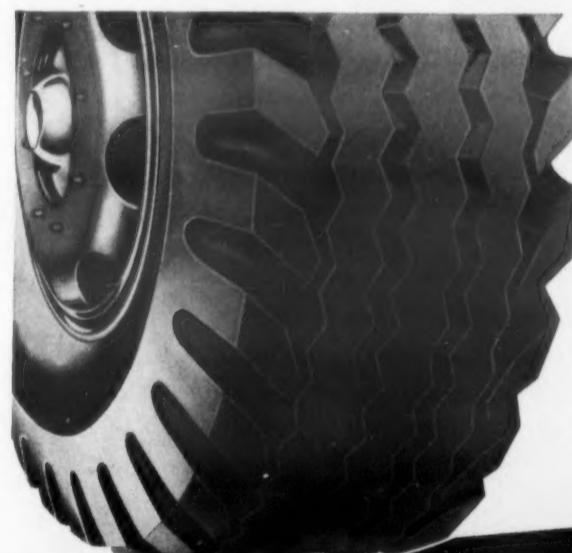
With its constant mesh gearing it provides continuous traction throughout the entire gear range, so permitting a super, smooth, cushioned gearchange, a very important feature when one considers the type of vehicle to which the unit is fitted.

A latest type air control for the gearbox is now available providing finger light gearchange, this is of simple and robust design, requiring no maintenance.

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**Dual-purpose
ALL-TRACTION**

For all-round fitment, giving better performance and cutting costs in on-and-off-the-road hauling. Deeper tread gives longer non-skid mileage. Tough, rugged shoulder bars give extra traction off the road and continuous centre ribs ensure long even wear on the road. Tension-Dried Gum-Dipped cord for super-strength body.

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Best on the road... and off

**Dual-purpose
SUPER MILEAGE
LUG**

For rear wheel fitment. Outlasts any tire of its kind. Specially designed dual-purpose non-directional traction tire for use where off-the-road service is frequent and severe. Power Bite Traction design, with cross grooves, heavy shoulder lugs and circumferential ribbing, gives maximum pulling-power and performance. Tension-Dried Gum-Dipped cord for super-strength body.

EXPERIENCE COUNTS

45 Factories throughout the world.
Firestone total sales exceed £1,000,000 per day.



CONVEYANCER-SCOTT

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PLATFORM TRUCK AND
LOW LOADER FIXED
PLATFORM TRUCKPLATFORM
TRACTORFIXED PLATFORM
TRUCKELECTRIC HORSE
(LOW OR HIGH
PICK UP MODELS)INDUSTRIAL
TRACTORElectric Trucks
and Tractors

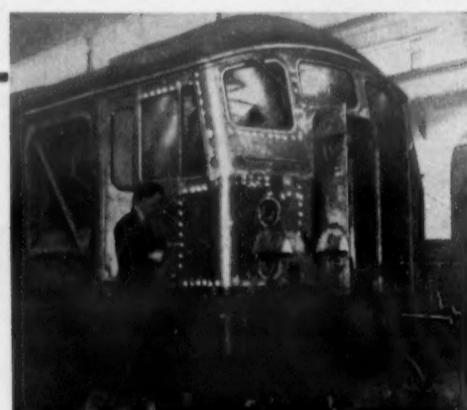
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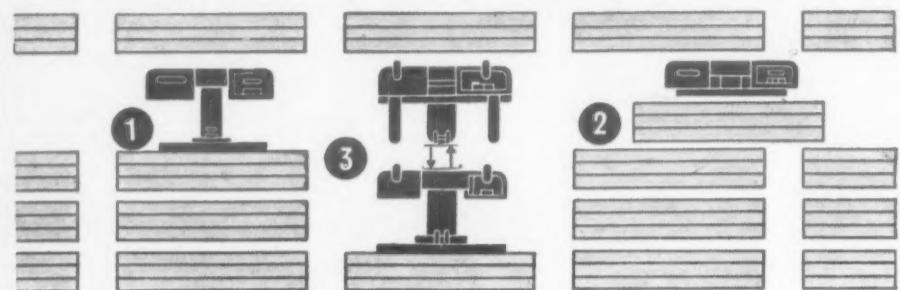
SIDE-OPERATING REACH TRUCK

All-ways Travel

STACKING IN DEPTH FROM NARROW AISLES

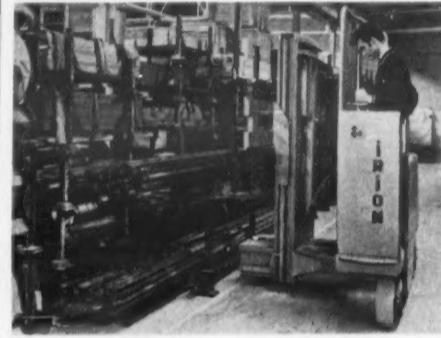
LATEST addition to the Irion range of side-operating fork-lift trucks, supplied by Materials Handling Equipment (Great Britain), Limited, 40A Dover Street, London, W.1, is the Lizard electric side-loading reach truck. It

combines all the virtues of the reach truck with those of a side-fork truck, i.e., it will operate in aisles of a minimum width of 53 in. and can move into and out of deep stacking systems, as illustrated in our diagram.



The three particular virtues of Irion Lizard side-operating reach truck shown in diagram form:

1. Normal side loading with reach action
2. Forward or reverse travel with side load carried on forks or platform
3. Sideways travel, coupled with reach action, to facilitate stacking in depth



The truck operating with wheels in fore-and-aft travel position

The Lizard is a four-wheeled machine in which all the wheels can be rotated through 90 deg. by a hydraulic jacking system thus enabling it to move in any direction at will, forward, backwards, or sideways. In fact, the Lizard will turn completely in its own length of 101 in. The driving wheels are those mounted at the front and rear of the chassis proper, while the load-carrying platform, which extends from the chassis, is supported on twin wheels. There is thus in effect a three-point load bearing on the floor surface. The mast and reach mechanism are mounted on the load-carrying platform. When travelling the unit load is normally supported on the platform, thus ensuring greater stability.

Maximum capacity is 30 cwt. and standard lifting height 10 ft., although models with a 11 ft. 6 in. or 13 ft. lift are available. The width of fork setting may be varied from 32 in. to 86 in., a valuable feature where timber or similar long unit loads are to be handled. Orders are already in hand for the new truck.

Saturn Gas Turbine

NOW AVAILABLE FROM PERKINS

NOW being marketed by Perkins Gas Turbines Limited, a subsidiary of F. Perkins, Limited, is the latest U.S.-built Solar gas turbine—the 1,250-h.p. Saturn, suitable for military and industrial applications. It can be used as a propulsion unit for fast boats, as a power source for electric generators, as a ground support unit for advanced jet aircraft and for many types of pump or mobile equipment. It is available in both constant-speed and variable-speed versions.

The two-shaft variable-speed version of the engine is said to offer special advantages for commercial workboats and other craft, giving quicker acceleration, better manoeuvrability and positive emergency stops. The direct-drive version operating at 20,000 r.p.m. is suitable for use with the latest designs of high-speed air and gas compressors, eliminating the need for reduction gearing.

Most Types of Fuel

Equipped with push-button starting, the Saturn gas turbine requires no warm-up and reaches full power in a maximum of 40 sec. even after long

standby periods and in extreme climatic conditions, varying from below zero to 130 deg. F. It can be operated efficiently on most types of fuel, including petrol, paraffin, diesel and jet fuels and natural oil manufactured gas.

The Saturn is rated at 1,250 h.p. for intermittent use and 1,100 h.p. for continuous use. The engine has a thermal efficiency of 23 per cent and a fuel consumption of 0.60-0.63 lb. per h.p.-hr. The basic engine weighs about 950 lb. or less than one-tenth the weight of conventional engines of similar horsepower and service life. It occupies only 50 cu. ft., is 69 in. long, 45 in. wide and 44 in. high. A dry-sump lubrication system is used and low heat rejection permits use of a small oil-to-air or oil-to-water heat exchanger for cooling.

Perkins has exclusive rights to manufacture and sell throughout Europe, Africa and the British Commonwealth, excluding Canada, all gas turbines produced by the Solar Aircraft Company, San Diego, California. Perkins is concentrating initially on producing the 50-h.p. Mars gas turbine and plans eventually also to manufacture other types at Peterborough.

FUTURE OF STEEL

Port Talbot Traffic

IN an illustrated talk to the Railway Students' Association of the London School of Economics recently, Mr. W. F. Cartwright, assistant managing director and general manager of the Steel Company of Wales, Limited, outlined his views on the future of the steel industry. He confided that metal sheets were always sent by road to lessen the risk of damage. One of the difficulties of the industry, he said, was unloading and storage and it was planned to build at Port Talbot to accommodate ore ships of 100,000 tons to alleviate this. The company had had to build 80-ton coal wagons to overcome the problem of coal storage, for previously the cheapest method of storing coal was to leave it in the wagons. The general manager of the Western Region, Mr. J. R. Hammond, who was in the chair, promised to heed some of Mr. Cartwright's suggestions as to rail transport.

ITALIAN DOUBLE-DECKERS

(Continued from page 9)

room above the centre gangway is 5 ft. 8 1/2 in. in the upper saloon and 6 ft. 2 1/2 in. in the lower saloon. Overall height of the vehicle is 13 ft. 7 in.

The introduction of these large double-deckers in Italy will no doubt be watched with keen interest by operators in other countries faced with mounting traffic and staff problems. Although double-deck buses of the types used in the U.K. and in Germany were carefully considered at one time, it is now evident that Italian vehicle builders have gone their own way in the layout and design of the new units. To accommodate short-ride passengers in the lower saloon and longer distance travellers in greater comfort on the top deck seems a reasonable proposition. Whether this method will emerge from the experimental stage to become common practice must, to some extent, depend on the co-operation from the public when the full-scale trials are in progress.

B.T.C. TRAFFIC RECEIPTS: PERIOD NO. 12-1960

	Four weeks to			Aggregate for 48 weeks to		
	Dec. 4 1960	Nov. 29 1959	+ or —	(£ thousands)		
				Dec. 4 1960	Nov. 29 1959	+ or —
PASSENGERS						
British Railways	9,604	8,884	+	720	139,204	129,252
London Transport	4,382	4,285	+	97	52,427	50,664
Road passenger services	2,150	2,004	+	146	24,147	22,008
Railways	4,432	4,206	+	226	57,441	56,461
Provincial and Scottish Buses	190	195	—	5	6,913	7,189
Ships						
Total Passengers	20,758	19,574	+	1,184	280,132	265,574
FREIGHT, PARCELS AND MAILS						
British Railways	8,670	8,784	—	114	94,919	92,749
*Merchandise and livestock	3,901	3,883	+	18	45,324	40,915
*Minerals	9,560	8,763	+	797	100,447	100,185
*Coal and coke	4,633	4,391	+	242	51,940	49,904
*Parcels, etc., by coaching train						
*Total Freight, British Railways	26,764	25,821	+	943	292,630	283,753
Others	4,795	4,613	+	182	53,593	51,355
Total Freight, Parcels and Mails	31,559	30,434	+	1,125	346,223	335,108
Aggregate	52,327	50,008	+	2,319	626,355	600,682

*Includes receipts from collection and delivery, etc. and from railway freight traffic within Commission-owned dock areas.

SOCIAL AND PERSONAL

New M.o.T. Headquarters

ON Monday this week the Ministry of Transport took up occupation of the first of its new offices at St. Christopher House, Southwark Street, London, S.E.1. The London traffic management unit and London traffic division moved from Berkeley Square House to St. Christopher House on the same day. The Minister and other senior officers, together with the inland transport and shipping divisions, will be moving from Berkeley Square House during next month.

Mr. G. J. Rackham, a director of the Simms Motor and Electronics Corporation, Limited, is retiring after more than 50 years in the motor vehicle engineering industry. He was chief engineer of Simms Motor Units, Limited, for some years and previously with the Leyland and A.E.C. organisations.

Mr. F. V. Spillard, who has been appointed district traffic superintendent, Exeter, Southern Region, B.R., was educated at Skinners' School, Tunbridge Wells, and joined the former South Eastern and Chatham Railway as a probationer in 1919. After three years' training in station and district office working he was appointed to the operating department of the superintendent of the line's office in 1922, becoming outdoor assistant to the superintendent of operation, Southern Railway, in 1938. He served throughout the 1939-45 war in the Movements and Transportation Branch, Royal Engineers.

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Mr. J. D. J. Saner, M.C., engineer-in-chief of the Mersey Docks and Harbour Board, retired on December 15. As already announced, his successor is Mr. N. A. Matheson.

At the annual dinner and dance of the Institution of Locomotive Engineers, Mr. Derek C. Brown, the president, welcomed the guests and especially the ladies, to whom he promised a part in the Institution's golden jubilee celebrations next May. Mr. Maurice Crane acted as master of ceremonies for this enjoyable function.

Crofts (Engineers), Limited, Bradford, has appointed the following sectional directors: Mr. Mr. E. J. Holdin, home sales director (previously general sales manager); Mr. F. Rotheray, overseas sales director (previously overseas sales manager); Mr. H. W. Cameron, London area director (previously London area manager); and Mr. A. Spencer, commercial director (previously commercial manager).

We regret to record the death of Mr. C. A. Wilson, M.I.C.E., F.R.S.A., divisional engineer, South Eastern Division, Docks and Inland Waterways Executive, until retirement in 1956. He was previously chief engineer of the Grand Union Canal Company. In the 1939-45 war he was a member of several Ministry of War transport committees dealing with waterways and was on the panel of consulting engineers set up by the War Office. Mr. Wilson was 69.

Mr. E. Dalton, M.B.E., has been appointed assistant commercial officer, North Eastern Region, B.R. He joined the London and North Eastern Railway in 1925, in 1934 was appointed a traffic apprentice. In 1947, after war service, Mr. Dalton became head of general section, chief regional office, York. He was appointed assistant district operating superintendent, Darlington, in 1955 and assistant to the general manager (general) at York in 1957.

Mr. C. Ayers has been appointed to the post of district goods superintendent, Leeds, North Eastern Region, B.R. Mr. Ayers, who was educated at the Queen Elizabeth Grammar School, Wakefield, began his railway career with the former London and North Eastern Railway in 1928. He was subsequently appointed a traffic apprentice and on completion of his training was appointed assistant in the goods manager's rate office, York. In 1938 he became chief research clerk, freight development section, goods manager's office, York. During the war, Mr. Ayers, who attained the rank of lieut-colonel in the Royal Engineers, was awarded the M.B.E. and was twice mentioned in dispatches. On demobilisation he became head of the development and special travel section, district passenger manager's office, York, and in 1947 was appointed passenger and parcels agent, York. A year later he was appointed head of the canvassing and development section (passenger), commercial superintendent's office, York, and in 1955 became sales assistant to the chief commercial manager, York. In 1956 he took up the post of passenger assistant to the chief commercial manager, York. He became assistant commercial officer, Scottish Region, Glasgow, in February of this year and returned to the North Eastern Region in August as acting district goods superintendent, Leeds.

Mr. W. A. Standley, A.M.Inst.T., has retired after 38 years as traffic manager of Chance Bros., Limited, the Smethwick glass manufacturers. He served the whole of his 51 working years with the firm.

Christmas Message to B.T.C. Staff

AS is his custom, Sir Brian Robertson, chairman of the British Transport Commission, has issued a Christmas and New Year message to all members of the staff throughout its undertakings. He says: "Christmas is a family occasion. Because our organisation is so large it would seem to others to be impersonal. In fact I believe that there is a genuine family feeling throughout it. I certainly am sincere in wishing, on behalf of my colleagues and myself, to every one of you—Happy Christmas to you and your family."

For many of you it will be a working Christmas. It is of the nature of our business that this should be so. It is our job to give service where service is required. 1960 has been an eventful year for us in many ways. On balance it has been an encouraging year. I hope that 1961 may be a better year still for you and for the great industry in which we serve."

Mr. A. K. Dytch has been appointed to the position of district traffic superintendent, York, North Eastern Region, B.R. Educated at Doncaster and Rutherford (Newcastle) Technical Colleges, Mr. Dytch completed a premium apprenticeship at Doncaster locomotive works in 1935 and from then until 1941 served as a technical inspector at various motive power depots in the North-East. From 1941 to 1943 he occupied positions of district inspector, Darlington, headquarters technical inspector, York, mechanical foreman at York motive power depot and locomotive shedmaster at West Hartlepool. In 1946 Mr. Dytch became assistant district motive power superintendent, Hull, and a year later technical assistant to the motive power superintendent, York. He became general assistant to the motive power superintendent, York, in 1950 and moved to Wakefield in 1956 as district motive power superintendent. He returned to York in 1959 as acting assistant motive power officer, North Eastern Region, the position he now vacates to take up his new appointment.



The Eastern Region Musical Society gave a Christmas carol concert at the Guildhall, London, on December 16, the programme being carried out in a most pleasing manner.

Mr. W. E. Lambourn, joint deputy managing director of the Pressed Steel Co., Limited, has reached retirement age and will retire on December 31. Mr. F. E. Cairns (previously joint deputy managing director) will become deputy managing director.

Mr. H. N. Edwards, who has served as chairman of the Railway Carriage and Wagon Building Association for the past seven years, has at his own request relinquished that position, and Mr. D. J. C. Robertson, C.B.E., T.D., B.Sc., has been elected to fill the vacancy.

We regret to record that Mr. George L. Hardie, Scottish area manager for Transport Brakes, Limited, of Bristol, died this month. Mr. Hardie had been ill for six months. He joined Transport Brakes, Limited, some 15 years ago and operated from the Edinburgh office.

Mr. E. T. Croker, hitherto district manager, Gloucester district, Western Division, B.R.S., has been appointed divisional traffic officer, Western Division, in succession to the late Mr. P. J. Lewis. Mr. Croker entered the service of H. W. Hawker, Limited, Bristol, in 1941, and in 1944 was appointed general manager. He has been B.R.S. district manager at Gloucester since 1950.

Mr. F. A. White has been appointed principal executive assistant in the traffic superintendent's office, Central Road Services, London Transport. He will be responsible, under the direction of the traffic superintendent, for all traffic matters of the Central Road Services department. He has also been appointed to represent London Transport on the London and Home Counties Stopping Places Advisory Committee.

Mr. J. H. Giffin, M.B.E., M.Inst.T., is retiring as superintendent (running), Central Road Services, London Transport. He has held the position since it was created in 1957 to co-ordinate and develop measures for improved regularity of bus running in the Central area. Mr. Giffin joined the service of the London General Omnibus Company in 1911, and has worked in all sections of the road operating department, becoming assistant to the staff superintendent in 1934. He saw service in the two world wars and was in Italy from 1943 to 1945, reaching the rank of lieut-colonel. He was awarded the M.B.E. (Military Division) and was mentioned in dispatches. On his return to London Transport he was appointed South West area divisional superintendent, Central Road Services, located at Camberwell. When a South-West operating division was formed in 1950 he moved to Vauxhall. As superintendent of running he has latterly been aided by the electronic bus scanner known as BESI, and the bus running control in Central London. Mr. Giffin is vice-president of the Auxiliary Omnibus Companies Association.



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IMPORTANT CONTRACTS

Forth Road Bridge Progress

CONTRACTS valued at over £3 million for further work in connection with the Forth road bridge were announced this week. Whatlings, Limited, has been awarded the contract for building the northern approach roads and Reed and Malik, Limited, is to build the bridge viaducts. The northern approach roads will provide a motorway link into Fife and include two 1,000-ft. tunnels, a 6,000-ft. viaduct and what is said to be the first "octopus" junction (eight slip roads) in Britain where the approach road is to cross the future East Fife regional road. Work under both contracts is scheduled to take two years.

Reconstruction of Stranraer Harbour

A contract has been placed by the Scottish Region of British Railways with Kinnear Moodie and Co., Limited, Glasgow, for the reconstruction of part of the pier at Stranraer Harbour.

Perkins Marine Engines

Perkins Engines, Limited, has recently shipped 12 100-h.p. six-cylinder S6 diesel engines to the Pakistan boatbuilding firm, MacDonald Layton and Co., Limited, Karachi, to power six fast craft under construction for the Karachi Customs.

Hong Kong Orders More Guy Buses

A recently completed order from the China Motor Bus Company, Hong Kong, for 45 Arab bus chassis from Guy Motors, Limited, has been followed by another for an additional 10 similar vehicles. All are powered by Gardner 5LW diesel engines.

B.P. Energol for Italian Nuclear Station

B.P. Energol lubricants have been chosen to lubricate Italy's first nuclear power station. The new plant is the Latina Power Station, about 40 miles south of Rome. Its design and the manufacture of much of its equipment is being carried out by the British consortium, the Nuclear Power Plant Company, and it is due for commissioning next year.

Albions to Iceland

Another five Albion Chieftain 7-ton lorries have been ordered by the Albion Icelandic agent, Kaupfag Arnesinga, Selfoss. Special equipment includes road wheels suitable for fitment of snow chains and specially powerful windscreens, wipers, operated by vacuum from the brake reservoir, capable of moving heavy snow deposits.

More Rawlings Windows for Ceylon

Rawlings Manufacturing Co., Limited, has secured a repeat order for over 6,000 windows for equipping buses under construction for the Ceylon Transport Board. The company has also received orders for windows from the Italian coachbuilder, Varesina S.p.A., and for 20,000 coach ashtrays from Duple Motor Bodies, Limited.

Uruguay Orders More Leylands

Less than three months after ordering 30 Leyland buses, Compania Uruguaya de Transportes Colectivos, S.A., has placed a further order, valued at nearly £320,000, with Leyland Motors, Limited, for another 80 vehicles. The latest contract is for 70 Worldmaster buses and 10 Leyland-M.C.W. heavy-duty integral 44-seat single-deckers; it brings the total number of buses supplied to C.U.T.C.S.A. in recent years to more than 600.

Simms to Handle Eascolyte

Simms Motor Units, Limited, has come to an agreement with Eascolyte Electrical (Holdings), Limited, under which Simms will act as official distributor of Eascolyte low-voltage fluorescent lighting equipment through Simms branches. The Eascolyte range includes seven types of transistor inverters designed to provide reliable and economical operation from battery supplies of fluorescent tubes from 5-ft. 80-watt down to 12-in. 8-watt units.

Automatic Approach Capability for Heralds

The Sperry flight director gyropilot has been chosen for the Handley Page Dart Heralds, six of which were ordered recently for Jersey Airlines and three for British European Airways. The Sperry equipment brings large-aircraft instrumentation and control standards to the branch-line category, without complexity or significant weight increase. Operationally, the equipment enables aircraft so fitted to make automatic ILS approaches down to minimum safe altitude, while automatic height holding can also be selected.

Western Region Contracts

The Western Region of British Railways announces the following contracts:

Cowans Sheldon and Co., Limited, Carlisle, for three wagon turntables at the carriage and wagon works, Swindon.

M.L. Engineering (Plymouth), Limited, Maidenhead, for telephone train control equipment at Plymouth.

12 trunk telephone carrier circuits between Cardiff and Swansea.

Stevens and Co. (Bristol), Limited, Bristol, 9, for reconstruction and widening of bridge at Lawrence Hill, Bristol.

Willoughby (Plymouth), Limited, Plymouth, for annual overhaul and survey of ss. Sir Richard Grenville.

Nott, Brodie and Co., Limited, Bristol, 3, for repairs to piers of bridge on the Gloucester Docks branch.

New Eastern Region Contracts

The Eastern Region of British Railways announces the following contracts:

Thos. W. Ward, Limited, London, W.C.2, for a diesel crawler tractor with bulldozing equipment.

Ericsson Telephones, Limited, London, W.C.2, for train describer equipment between Shenfield and Colchester.

Falk Stadelmann and Co., Limited, London, E.C.1, for train indicators for 18 stations on the London, Tilbury and Southend line.

The Yorkshire Hennebique Contracting Co., Limited, York, for reconstruction of jetty and the provision of foundation for a new wagon tipper at Keasby.

Harland and Wolff, Limited, London, E.18, for alterations to deck of pontoon at Gravesend Town Pier.

Carter Horneley (Engineers), Limited, Sheffield, 4, for repairs to bridge between Killamarsh and Waleswood.

North Eastern Region Contracts

The North Eastern Region of British Railways has placed the following contracts:

Firth Blakely, Sons and Co., Limited, Church Fenton, for signal gantries.

J. W. Roberts, Limited, Bolton, for the application of sprayed limpet asbestos to certain components of Enfield electric coaches under construction at York car works.

I.T.D., Limited, Birmingham, for one fork-lift truck, six 1-ton battery-operated platform trucks and ancillary equipment for use at Bradford Valley goods depot.

Weldall and Assembly, Limited, Stourbridge, for mild-steel bulk-store hoppers at York Central Concrete depot.

Tarsig, Limited, Stockton-on-Tees, for prestressed bridge beams for the new up yard at Newport, and for bridge at South Shields.

Ruddock and Meighan, Limited, Barnsley, for reconstruction of superstructure of bridge carrying the Ings Junction to Leeds Central branch over the Leeds to Huddersfield line.

Craven Bros. (Manchester), Limited, Stockport, for a wheel lathe at Shildon wagon works.

The Hunslet Engine Co., Limited, Leeds, for a rail-mounted dredge trencher.

The Pirelli General Cable Works, Limited, Southampton, for 11 steel floodlighting towers at the up yard at Dringhouses, York.

Wakefield-Dick Industrial Oils, Limited, London, N.W.1, for two mobile stillages for lubricating diesel locomotives at Holbeck (Leeds) main power depot.

Printed by Odhams (Watford) Limited, St. Albans Road, Watford, Herts, for and published by Modern Transport Publishing Co., Limited, Russell Court, 3-16 Woburn Place, London, W.C.1.

SHIPPING and SHIPBUILDING

Orkney and Shetland Offer

ABOUT the largest independently-owned shipping business in Aberdeen, the North of Scotland, Orkney and Shetland Shipping Co., Limited, is the subject of a cash offer from Coast Lines, Limited. The fleet comprises seven coasters aggregating 8,610 tons gross. The directors have recommended the offer to shareholders. Full acceptance would involve a cash outlay of £1,146,000 by Coast Lines. It already has a small interest.

Bulk Carrier Blows Up

FOLLOWING an explosion and fire, the 56,000 deadweight tons ore-oil carrier *Sinclair Petroleum* sank in the South Atlantic recently. She was the largest bulk carrier yet to be lost. Built in 1955, the vessel was owned by the American D.K. Ludwig group of companies and flew the Liberian flag.

For the Breakers

THE 20,448-ton Canadian Pacific liner *Empress of France*, built as the *Duchess of Bedford* in 1928 by John Brown, and which arrived at Liverpool from Montreal recently on her last passenger voyage for the company, has been sold to the British Iron and Steel Corporation for breaking-up. She follows closely upon the sale of another North Atlantic liner, the *Cunarder Britannia*, to British breakers.

Mobile Gangway

CONSISTING of a mobile tower, a light alloy gangway unit has been evolved by the B.P. organisation as a means of boarding tankers at any stage of discharging. The slope of a normal gangway would vary greatly as the ship was lightened and with the rise and fall of the tide. The gangway is cantilevered out from the tower and is hand operated. It retracts when not required. At its landward end it gives access to a platform on the tower from which the descent is by a ladder.

Coastwise Trade Overlooked?

ABSENCE of evidence that Government spokesmen are concerned about the future of the diminishing fleet of coastal tramp shipping was deplored by Mr. F. A. Everard in London last week. In 1959, he pointed out, coasting tramp vessels carried about 27 million tons of bulk cargoes between United Kingdom ports. Some 22 million tons was coal and the balance consisted of road-stone and road slag, cement, fertilisers, clay, scrap and grain and other commodities suitable for moving in full shiploads. Although coastal carryings fell well short of those of road and rail, it must be borne in mind that, whereas the road hauliers and railways carried a large volume of traffic over relatively short distances, coasting voyages were mainly longer.

Fast Bunkering at Aden

BOTH the *Oriana* and *Canberra*, 42,000 tons and 45,000 tons respectively, are to bunker at the B.P. installation at Aden. The two liners will jointly provide a new fast service between the U.K. and Australia, and to meet their schedules a quick turnaround at Aden is essential. As each ship has a fuel capacity of nearly 7,000 tons, this required that they should be bunkered at the rate of 1,500 tons an hour. To achieve this high rate of fuelling, B.P. at an early stage made certain suggestions which were accepted by the owners of the two liners, regarding the planning of the interior pipework of the ships' oil bunkering systems and the positioning of the control points for the electrical signalling equipment used between ships and the B.P. installation at Aden.

Overloading Summons

WHEN a Gravesend motor boat owner was summoned for allegedly taking on board more passengers than the boat was licensed to carry, Gravesend magistrates had to decide if a person in a boat was the same thing as a passenger. The prosecution, for the Port of London Authority, said the boat, the *Monarch*, was licensed to carry 12 persons. An Essex river police patrol boat had seen the boat at Gravesend with 20 people on board. At Gravesend Town Pier 19 had disembarked.

When the evidence and legal arguments had ended it was stated by the court chairman that the defence had put forward the point that the prosecution had not proved that any of the individuals on the boat had paid their fares. There was no interpretation in the Act, under which the prosecution was brought, of the words "passenger" and "persons" and the bench had the difficult task of deciding if they were the same. The Bench decided that section 330 of the Act mentioned in the summons was meant to refer to persons who had paid their fares and the summons was therefore dismissed.

FINANCIAL RESULTS

NOTES on the trading results, dividends and financial provisions of companies associated with the transport industry are contained in this feature, together with details of share issues, acquisitions and company formations or reorganisations.

Park Royal Vehicles

Park Royal Vehicles, Limited, is paying a dividend of 10 per cent, tax free, for year ended September 30, 1960 (nil). Consolidated net profit £94,602 (£32,711).

Tecalemit

Group net profit of Tecalemit, Limited, for the year ended July 31, 1960, is £298,359 (£187,740), dividend 18 per cent (effective 13 per cent).

Guy Motors

Speaking at the annual meeting of Guy Motors, Limited, the chairman, Mr. A. Chamberlain, indicated that the company was nearing the break-even point. In the next few months the position should improve still further. The company had suffered a loss of £23,000 in August and £11,000 in September, but a profit of £300 was made in October, while there was a loss of £2,500 in November. Another shareholder invited the chairman to give an assurance that the company would go beyond the break-even point and would embark on a profitable career. Mr. Chamberlain said: "I am not going to say 'yes' or 'no.' I am only going to say that as certain savings come into operation, as they will increasingly during this year, it is my belief that this company will trade at a profit. But I cannot tell you when."

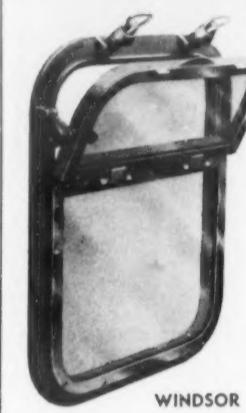
Associated Commercial Vehicles

Associated Commercial Vehicles, Limited, reports that the profit of the group for the year ended September 30, 1960, amounts to £1,512,935 (£396,115). The net profit after all charges including taxation is £715,113 (£439,432). A final dividend of 15 per cent, with interim dividend of 7½ per cent, will make a total for the year of 22½ per cent. Turnover has increased both at home and overseas and this trend, especially in the export field, is expected to continue. Orders on hand show a satisfactory increase over a year ago. The directors recommend raising further capital by an offer of 2,087,500 shares of £1 at 30s. each on a one-for-one basis. They anticipate that profits for the year ended September 30, 1961, should enable them to pay a total dividend for that year of 18 per cent on the ordinary stock as increased by the new issue.

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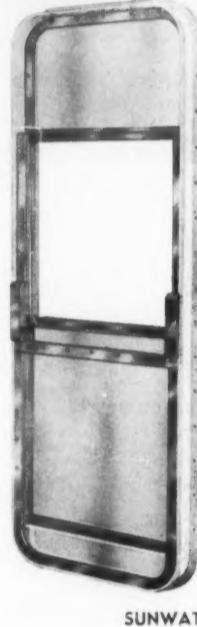
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